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WHERE WE CAN "GET TOGETHER"

Criticism has degenerated into pessimism and nihilism, and both doctor and druggist have been harmed thereby. We must fight for a better therapy, enlightening the public as to its possibilities. The time has come for a forward movement!

WHAT fools these mortals be! Here are a lot of drug makers and sellers who, jealous of the rapid progress of the active-principle movement, seek to oppose it and to check the rising tide of faith in these remedies. They do not seem to realize that in so doing *they are destroying faith in all drugs*, and playing directly into the hands of the faith curers and other non-drug people. One would think that ordinary common sense would teach these people the wisdom of favoring any movement calculated to restore the dying faith in the use of drugs. Faith in one means faith that there are values in others—the men who have a mine closely adjoining a heavy ore-producer never fail to find the capital for its development.

So with the retail drug interests—they ought to see that they can not tell the public anything new about the old forms of medicines. All that is an old story; but if they come forward with a new and im-

pressive account of the great advances made, and the reliable forms of drugs now being introduced, they have, as the news-boy said, "something to holler."

There has not appeared in a century anything so well worth active pushing on the part of the entire drug trade, manufacturing, wholesale and retail, as the active principles. Instead of recognizing this obvious fact, a powerful section of the trade is apparently trying its best to kill the movement, and the rest are too cowardly to raise their heads lest somebody see and aim a blow at them.

Meanwhile the retailers are becoming unpleasantly aware that the movement to bring the profession to the exclusive use of U. S. P., N. F. and Council-endorsed products is resulting in an immense and rapidly increasing loss of prescription trade. Physicians can not be driven back to the use of the old and well-tried preparations urged upon them, because many of them are already discredited. Under pressure

they simply quit using all drugs and fall in with the current sweeping toward non-drug therapeutics.

The medical profession had become dissatisfied with its drugs and asked something better. The manufacturers responded with their elegant mixtures, and the doctor gave them a trial, and liked them. There were obvious disadvantages; the over-zealous advocacy of these men disgusted the doctor, and the movement against commercial therapeutics began. Instead of recognizing that *the popularity of the proprietaries arose from a legitimate demand for a better drug-therapeutics*, the unwise pharmacists tried to switch the doctor back to the old trash. That the movement is resulting in failure should have been foreseen, but the interests back of it were too powerful.

There is a remedy for this nihilism: It is to be found in *constructive* work rather than in tearing down and attempting to hamper and impede every forward movement. With remedies *upon which he can depend* the physician can accomplish more for his patients than by any of these popular fad-methods. The natural thing, the profitable thing for doctor and druggist alike, is to foster any and every effort directed toward the securing of better remedies, then cry out the truth "from the housetops." The pessimists have had the spot-light long enough. Though physician and pharmacist may differ in detail, at the core of the situation their interests are one.

Let us commence *right now* an optimistic forward movement for real therapeutics.

A RACE OF WEAKLINGS

We asked a physician the other day, whom we knew believed in active-principle therapeutics, why he did not openly advocate it? His reply was: "I find it preferable to act along the lines of least resistance."

This theme is the working formula on which very many of our profession conduct themselves today. The world is full of just such weaklings who are lacking in the native independence which leads men to stand up for their rights regardless of consequences.

The question of whether a thing is right or wrong is of secondary importance to them. First comes the personal matter: what effect their advocacy of it will have upon their prospects, their friendships, their chances for advance in the profession?

There was a time in the memory of those living when the profession was not thus constituted, when native worth and proud independence existed. There were then men who would speak out their minds as they really thought, and who stood ready to defend their views as thus expressed—men who were not afraid to stand up before an assembly, not one person in which was in sympathy with him, and give utterance to the Truth, like grand old Luther.

It is said that it takes three generations for the descendants of European immigrants to attain the physical stature of the average American. Let us hope that it does not take this long for their descendants to assume the independence and dignity characteristic of the real American.

If you hope to improve the world, first look to be reprov'd. Man is suspicious of his benefactors. Jenner was fought and cursed for fighting the smallpox curse. The universe does not drop its beliefs—they must be knocked down by proof. The mere possession of knowledge is nothing—it is totally useless until it is used.
—Kaufman.

THE ADMINISTRATION OF MEDICINES

The granule of the alkaloidist differs from the pill of the pharmacopeia. The former possesses a solubility perfect and almost instantaneous, being composed solely of the active principle enveloped in milk-sugar, the latter made into a mass by an appropriate admixture of tragacanth or other gum. This prevents quick solution, besides, the milk-sugar granule resists the ravages of age and external influences. I have in my cabinet dosimetric granules now eighteen years old that have twice crossed the continent and the equator, and not the slightest deterioration can be detected in them.

The powder is not a good form in which to dispense a medicament. The division requires prolonged trituration, after which each

dose should be weighed, not merely guessed. It does not disguise odor or taste.

In this disadvantage the solution shares. If it be chosen, care must be taken that perfect solution is effected, and the spoon by which the dose is administered should be the same with which the water is measured.

The soluble pill ranks closer to the granule. Its solubility is the dominant question. Usually this is left to the pharmacist, who selects his excipients.

In testing the solubility of various forms of pills, Van Renterghem made trial of those prepared with licorice and water, with honey alone, and with honey, extract of gentian and a trace of glycerin. He tried these pills freshly made, one month old, and three months old. Those weighing 15 to 20 milligrams dissolved, the first in ten to fifteen minutes, the second in ten to twenty minutes, the third in fifteen to sixty minutes. Pills of croton chloral, licorice and water, weighing 150, 75, 30 and 15 milligrams, dissolved in one hundred and twenty, twenty-six, sixteen and twelve minutes respectively. These were placed in a 2 : 100 aqueous solution of hydrochloric acid, and kept at a temperature of 36° to 37° C. in a water-bath. Every two minutes the vessel was well shaken.

Exposed to similar conditions the dosimetric granules dissolved as follows:

Strychnine arsenate, 4 minutes; calcium sulphide, 10 minutes; quassin, 20 minutes; lithium benzoate, 8 minutes; iodoform, 6 minutes; iron arsenate, 6 minutes; aconitine, 7 minutes.

Crystallized aconitine, when taken on an empty stomach, gave the characteristic tingling-tongue sensation in twenty-five to thirty minutes. Taken just after breakfast, no such sensation ensued.

Aconitine being eliminated in part by the bowels, constipation may favor reabsorption and accumulation. Hence the need of the morning saline laxative.

Dosimetry avoids habituation. Instead of exciting by big doses it incites by minimal doses, and thus renews the failing energies of the nerve-centers.

The milk-sugar granule unites the prime essentials as to the best form for medicaments.

It keeps indefinitely, without appreciable alteration, as long as it is preserved from moisture; it does not lose accuracy by attrition as does the tablet; it may be employed for hypodermic injection, since the excipient is soluble and nonirritant; and it dissolves as quickly as is needful. Moreover, its watery solution is scarcely disagreeable to the taste, and it is one of the rarest experiences to have a child refuse the granule or its solution, or for the most delicate stomach to reject it. Finally, its bulk is so small that the physician can carry in the space of a case weighing 3½ pounds nearly 30,000 granules, in 85 bottles; or if he desires a larger assortment he can, by the use of tablets and granules, put two varieties in each vial and have an assortment of 170 remedies with him. Incidentally, the cost of such an assortment averages only about one cent for thirteen doses.

We are all of us willing enough to accept dead truths or blunt ones, which can be fitted harmlessly into spare niches, or shrouded and confined at once out of the way. But a sapling truth with earth at its root and blossom on its branches; or a trenchant truth, that can cut its way through bars and soda, most men dislike the sight or entertainment of, if by any means, such guest or vision may be avoided.—
John Ruskin.

THE COURAGE OF CONVICTION

In the *J. A. M. A.* for December 12 Dr. C. F. Wahrer contributes a paper which, in such an assemblage, must have seemed like Samson among the Philistines. Take this example: "What results can you expect when you give an unknown remedy? It is like a man closing his eyes and firing a gun promiscuously into space, and then opening his eyes to hunt what he may have hit. Wouldn't it be better if he would hunt his game first, know what kind of a gun he has, know just what it is loaded with, and take careful aim before he pulled the trigger? And a good rifle is better than a 'scatter-gun' when you want to do precise work. Then, also, wouldn't single remedies, preferably the alkaloids and other active principles, freed from the dirt and dross with which they are often associated in nature, be more satisfactory than crude galenicals

of variable strength? If you want strychnine, why prescribe nux vomica? If you want quinine, why give the nasty, bulky Peruvian bark? If you want to give morphine or codeine, why give opium? And so on, a thousand times could I give you examples, only to take up your time. But a hint to the wise is sufficient."

Again he says: "While some think the findings of the Council may not always be final, nor their recommendations unbiased nor unprejudiced, yet it is making some people sit up straight and take notice."

That is exactly it.

OPSONINS, AND THEIR VALUE

Within the past few months we have had several inquiries from readers as to why more space was not given in this journal to the pros and cons of opsonic work. As our one desire is to make THE AMERICAN JOURNAL OF CLINICAL MEDICINE the greatest possible uplift for the general practitioner, we have acted on the supposition that this work was beyond him. The time necessary for this work, the apparatus required (and installation of an incubator is almost imperative), besides the special skill, not to mention a high-power microscope, places this work almost beyond the average man.

We do not go so far as to say that highly skilled laboratory men cannot detect variations in the opsonic power of the blood of either different individuals or the same individual under different circumstances, but we do contend that opsonic work as a whole is not for the rank and file.

In this connection, however, there is one matter which cannot have too much publicity, and that is the new line of therapeutics that has resulted from the original work of Sir A. E. Wright with the opsonic index—we refer to the use of "bacterial vaccines," so called. It is proved beyond a shadow of a doubt that in the bacterial vaccines we have a result-bringing means of combating certain obscure or un-get-at-able conditions. In our opinion it is not essential that these vaccines be autogenous, that is, manufactured from the particular germ that is caus-

ing the lesion that is to be treated. Stock-vaccines have been demonstrated to be of signal service in the treatment of certain conditions.

The general practitioner would do well in cases of infections, both local or general, to come in closer contact with the bacteriologist in order that he may find out definitely what germ or germs may be causing the trouble. He can then procure from several enterprising and reputable manufacturers vaccines which will materially increase his capacity to "deliver the goods."

Perhaps this will serve to explain to some of our correspondents why original articles and résumés of other original work on the opsonic index, its uses and technic, have not been given more space in our columns.

The truest wisdom is a resolute determination.

—St. Paul.

DOLLARS FOR THE DOCTOR

Last month we printed an article by Dr. Gordon G. Burdick on "The Physician as a Business Man." This month we have one by Dr. E. Gard Edwards on "A Physician's Cooperative Hospital." These are but the first of several articles to deal with the business side of the doctor's life which we shall publish this year. For instance, Mr. Zimmerman, of *System*, will write on "System in Medical Practice," and Mr. Sheldon, editor of *The Business Philosopher*, and founder of the well-known Sheldon School of Salesmanship, will discuss "The Doctor as a Salesman." We shall also have one or more articles on "The Abuses of Medical Charity," and we are planning a series of discussions upon "Organization for Medical Defense."

We are particularly anxious that every one of these articles and everything that shall appear in THE CLINIC upon any phase of this great subject shall be discussed fully and freely. We are also very anxious for suggestions, not only to help us make this feature interesting, but what is of far greater importance, a means of accomplishing something definite and tangible.

There is no sense in trying to dodge the issue—a crisis exists in our profession. We are being grafted upon and robbed right and left of the business which should be ours—even of the pay for the business which we are doing. We are getting poorer, while the great colleges, dispensaries and hospitals which we have created are getting richer, and cranks and quacks are prospering as never before. We must do something *for ourselves*. There, squarely, is the problem. It is a problem which particularly concerns the rank and file of the profession—you, Doctor—and it is this part of it which we are trying to serve.

"Doctors for doctors" is and has been our slogan. First, let us have a few more *dollars* for the doctor. CLINICAL MEDICINE will work strenuously toward that end.

UNCHRISTIAN NONSENSE: SOME HINTS

The Dietetic & Hygienic Gazette contributes editorially two suggestive cases. One, a middle-aged woman, complained of weakness and pains in the chest. She was ridiculed, told it was imagination, and discouraged from seeking medical advice until her cancer had progressed beyond the reach of cure. In the other case a young woman complained of debility and lameness. She also was told to take "mind cure," until the hipjoint disease had progressed beyond the curable stage.

We need not be in such a hurry to give assent to the Eddyite. We need not hasten to admit that "there's a great deal of good in it," that most people *think* they are ailing when all they need is to "forget it" and believe they are well. Genuine diseases have a habit of staying and progressing. They will not "shoo" any more than the grizzly acquaintance met in the mountains last summer. The black bear he met "shooed;" the grizzly didn't.

Tuberculosis, nephritis and many other maladies are grizzlies, and need something more. True, many complaints are made by patients which have little or no anatomic basis; but on the other hand, we meet every day cases where all hope of cure has

been lost through delay in consulting the doctor.

The only safe and right way is for *the doctor* to decide whether it's a case for treatment or for advice. "The man who is his own lawyer has a fool for a client." True; and this applies to the man who is his own doctor. On the other hand, we on our part must dissipate the feeling that has arisen of late, that the doctor's attitude to his patient has completely changed from the old ideals, and that graft rules our advice. The Eddyite cult, of disease being imaginary, is legitimately derived from this belief.

The way to restore faith in us as advisers is to deserve faith. There's no other way.

How much money are you putting in other men's pockets which might be kept for your own? Did you ever stop to think that three-fourths of the specialist's work is ordinary routine, with simple cases that you could easily learn to care for yourself, with small expenditures for books, instruments and equipment? Why not learn to do some of this yourself? Don't you need the money?

OSLER AND BEVAN

"The king's jester" of history was a "fool," so called—one who had wit (sometimes wisdom) on tap, to be drawn upon as occasion required. Many can be foolish, but only a few really witty; and when genuine greatness, especially in the serious field of medicine, sets out to be funny, the greater the greatness the more disastrously silly, as a rule, is the result.

A year or two ago the incomparable Osler, in an effort to be funny on a serious occasion, said something that caused him to be quoted as saying in effect that men over 60 have finished their period of influence and should be chloroformed! Foolish? Of course it was. And he didn't say it—at least he didn't mean it—but that's what the types credited him with; and away it went, hither and yon, round and round, lay press and otherwise, to be iterated and reiterated again and over again.

This apparently is all that really has lived from that undoubtedly great speech. How

much better than this silly thing would it have been if some profound, uplifting, optimistic therapeutic axiom, a veritable scintillating truth in medicine, had come down from that occasion to have lived in the hearts of an admiring profession for all time to come. An opportunity for incomparable good prostituted to folly.

Cases often come in doubles to the doctor, troubles (and sometimes joys) in pairs to us all, men in twins of occasion, which explains the synchronous foolishness of a well-known surgeon who, departing from that field in which he shines and invading the field of therapeutics of which he knows so little, attempted to show a superiority which he does not possess, by avowing, in an attempt to be funny, that "there is no medicinal treatment for pneumonia." Some great surgical fact expressed, some brilliant achievement recounted would have been an honor to himself and of lasting benefit to the profession and humanity. Did we get it? Not from the reporters; but just this foolishness—zip it went, lay press and otherwise; and still it's going, to the mortification and disgrace of the profession.

Did Dr. Bevan mean this? I don't believe it, and yet see what a holocaust of hope and life has followed in the wake of this temporary foolishness to which on occasion he permitted himself to stoop.

Did the profession believe it? Some did. Nihilistic tendency and laziness will grasp at anything that supports their choice. But the real working profession did not, for they know it is not true; and yet these words unwisely spoken have done uncomparable harm to the profession of medicine and set the forward movement of therapeutics back for many a year.

'Twas said by one wiser than ourselves that "the evil which men do lives after them; the good is oft interred with their bones." By the few who know these two great men they will be remembered for the good they have done, for what they have added of real professional uplift and betterment; but the great mass will just recall for all time to come that Osler, for cause, would chloroform at sixty, while Bevan——(?)——perhaps.

Why will even the best of men assume to pose as experts in everything, expressing opinions *ex cathedra* on a subject of which they really know mere'y enough to be dangerous? We all know 'tis but foolish or purposeful play to the galleries, but the laity, into whose press it promptly gets, do not appreciate this; therefore their confidence is shaken and the long-suffering profession is again disgraced.

Which reminds me that "the shoemaker should stick to his last."

Be not penny-wise; riches have wings, and sometimes they fly away of themselves; sometimes they must be set flying to bring in more. —Bacon.

TREATMENT FOR GALLSTONE-DISEASE

In *The Medical Record* for November 14 W. M. Berkeley contributes an important article on "Treatment of Inflammations of the Biliary Tract." He calls attention to the fact, true of all solids in fluid solution, that the probability of precipitation increases with the concentration of the solution and the sluggishness of its movement. The thinner the bile and the faster it flows, the fewer the stones and the smaller their size. This seems to explain the prevalence of gallstones in women, their habits being sedentary, their tissues relaxed by child-bearing; and their anemia, greater than that of men, tending to reduce the muscular tone of the gall-bladder.

The anatomic structure of the parts makes interference with the biliary tract one of the most ticklish tasks in abdominal surgery. The operation itself is beset with difficulties, the sequences are alarmingly frequent and perilous. The coincidence of jaundice increases the tendency to hemorrhage, retards the healing, and at times precipitates a fatal result. It is precisely in the most perilous cases that the operation has most frequently to be performed.

Dr. Berkeley contributes powerfully to establish the true therapeutic indications of these cases. He says there is no solid or fluid medicament so far known which will have any perceptible effect in dissolving stones already present in the gall-bladder. Particularly dangerous is the practice of

massage of the liver and of the region of the gall-bladder. There are no drugs known that have the least demonstrable effect upon gallstones. We may, however, select from among a large number of medicines that have more or less effect in increasing the fluidity of the bile and apparently stimulating its secretion. Any saline purgative will act in this way to some extent. Sodium phosphate in dilute aqueous solution before breakfast has long been approved. The alkaline mineral waters have an additional advantage, the chemicals being in extremely dilute solution.

Glycocholate and taurocholate of sodium have been experimentally and clinically proved to be direct and very valuable chologogs. These being split up in the alkaline intestinal juices into cholalic acid, it has been proposed to give the latter directly; "and the results so far with my own patients have been better than with anything similar that I have personally tried."

These remedies put into healthy condition an inflamed biliary mucosa, reduce intestinal putrefaction, move the bowels more freely, promote digestion, and by improving the general condition increase the resisting power.

Antifermentative drugs often are helpful. It will be absolutely necessary to keep the bowels open. Copious enemata are good. Rough riding on horseback and tight lacing should be forbidden. A mixed diet suits most patients, and they may be allowed within due limits almost any article of food that agrees with them. During jaundice fats should be excluded. The quantity of food should be small at each feeding and the intervals between meals short. Diet and hygiene are as important as medicine. Almost all recurrent attacks of cholecystitis are associated with a fresh attack of indigestion.

SANGUINARINE: WHAT IT IS AND WHEN TO USE IT

Sanguinarine is the chief active principle of sanguinaria, or bloodroot, but this alkaloid is also found in several other plants.

I have selected it for discussion here because I look upon it as the best of the group of stimulant expectorants; those which increase the sensibility of the respiratory mucosa and induce the patient to cough more energetically, and thus expel mucus which would not otherwise be properly ejected.

In small doses sanguinarine increases the appetite and facilitates digestion, strengthens the heart, lengthens the pulse and increases the respiratory secretion. Large doses cause a sensation of warmth in the stomach; still larger ones nauseate, sedate the heart, slow the pulse, and increase perspiration, expectoration, urine, bile and the menstrual flow. Yet still larger doses cause violent vomiting and catharsis, disorder of vision and great prostration. The saliva is increased by it, whatever the dose. After an excessive dose violent gastrointestinal irritation ensues, with burning pain, relaxation and the ordinary symptoms of collapse; namely, cold clammy skin, dilation of the pupils, an expression of anxiety; the spinal reflex is depressed. Death finally follows lethal doses, with paralysis of the respiratory and cardiac centers.

Sanguinarine has long been employed in practice as an emetic. In moderate doses it acts gently upon the liver, and hence is of value in chronic hepatitis, atonic dyspepsia, gastric and duodenal catarrh, and sick-headaches; to relieve the intestinal difficulties in rheumatism, dysentery and scrofula. The eclectics, besides as indicated, employ sanguinarine for anemic amenorrhea, dysmenorrhea of debility, headache, hysteria, vicarious hemoptysis, and also as a sexual stimulant in men. This alkaloid has not received the attention it deserves and is scarcely known except as a stimulant expectorant. This latter indication may be met in pneumonia, bronchitis, and especially in capillary bronchitis.

Great care must be taken not to exceed the useful dose, as sedation will then follow.

Another indication for the use of sanguinarine may be found in the treatment of acute

respiratory catarrhs. The suggestion is that disease existing in any tissue predicates a condition of low vitality, else the tissues would have been able to resist the attack of disease-producing agencies and throw off the malady; hence the indication for a special incitor of the vitality of these tissues, and this we find in sanguinarine.

In acute pharyngitis the application of any strong astringent mixture will frequently abort the attack. Sanguinarine may exert a somewhat similar effect, if given in strictly physiologic dose.

In relaxed conditions of the genitourinary apparatus sanguinarine is also of value, being a decided stimulant in both sexes.

In all these cases it is well to employ minimal doses, frequently repeated, until the desired effect is manifested. Give one of these small doses, and repeat every ten, twenty, thirty or sixty minutes, until slight nausea is manifested. This symptom is an indication that the dose is too large, and it should then be suspended or reduced. In cases of anemic amenorrhea the dose may be increased to five granules, given three times a day. Or, if this should nauseate, as it rarely does though, two granules may be given before each meal and four or five immediately on going to bed.

Sanguinarine fully meets the indications for which squill and senega usually are given. Of the three it is the better remedy. Squill is one of the most powerful vasoconstrictors in existence, rivaling and closely approaching digitoxin in this respect. This is generally a very objectionable feature of its action, except in cases of general dropsy, when it is actually desirable. In cases of acute respiratory catarrh and coryza, however, this vasoconstrictive action of squill, as presented in its modern representative, scillitin, may be quite valuable.

If sanguinarine be used in conditions such as named the dose should be exceedingly small, to keep well within the stimulant limits of its action; a milligram every one or two hours is quite as much as it would be prudent to give for this purpose. The application of this or any other remedy on this prin-

ciple is comparatively new in regular medicine. Our own attention has been particularly directed to this principle only about a year ago by a perusal of Prof. Mays' article in *The Boston Medical and Surgical Journal*, a paper to which we have often referred, as we consider it one of the most important contributions to therapeutics that has appeared for years.

Your father had a chance to buy a share of the original telephone stock, but because he was an average man and therefore narrow and suspicious of all that he did not understand, he congratulated himself for his common-sense and invested the money in cigars.

—Kaulman

THE DOCTOR HIS OWN WORST ENEMY

Why not look the situation squarely in the face. The medical profession has never been so hard up as it is right now. Not only are we poor but we are getting poorer; not only are we getting poorer all the time but we keep on praising, promoting and perpetuating the very system which is our undoing.

Who do the lobbying and wire-pulling to bring about the establishment of more eleemosynary institutions to take more money out of our pockets? Doctors.

Who establish the medical colleges and "go out" into the highways and byways for medical students to fill them, thus intensifying the competition in an already overcrowded profession? Doctors.

Who organize and run the free dispensaries and free clinics, giving their services free for the advertising (that's the right word) to be had from them, thereby turning into paupers thousands of otherwise self-respecting and pay-as-they-go citizens? Doctors.

Who encourage the foundation of the thousands of hospitals constantly springing up, which while quite generally founded by the church and nearly always ostensibly for "charity" are really expected to "make money," which money is largely taken out of the doctor's pocket? More doctors.

Who is responsible for the patchwork of medical legislation, which while it hampers the real doctor at every turn leaves the

quack and the faddist free to do absolutely as he may please. Doctors again.

What fools these doctors be! If ever there was a vicious circle this is one—every man trying to reach into his brother's pocket while his own is being picked. And because each man has his own little private "scheme" for personal profit we wink at it—yes, even encourage it!

Instead of working, every man for himself, each in his own blundering way, isn't it about time that we commenced to do some collective work for the good of all? The schemers, the wire-pullers and the geniuses may prosper under the present system, but most of us suffer.

This continual impoverishment of the profession is not necessary. In spite of all that has been said about overcrowding and competition there is still work enough, if we could get it, instead of letting it be shunted off on the siding for quacks, Christian scientists, Emmanuel healers, free hospitals and pseudo-charities. Society owes much to the physician. It should pay its debts and could be made to if we knew our business—and would get busy. We have been asleep. Let's wake up—we must if we are not to sink to the level of the mere laborer. (Already a decent plumber gets more for his services than the average doctor!)

What first? Why not get to the bottom of this matter of medical charities—so-called. A system which compels the doctor to carry this burden practically alone and which leads one doctor to graft upon or rob another doctor is on the very face of it essentially wrong. It is in the interest of society that the physician shall be *competent*. How can anyone expect to raise the standard of medical practice, when society is constantly taking away the doctor's chance to make a decent living? Charity is all right. We have proven that we believe in it by the sacrifices we have made for it; but we want and must have a readjustment of the burden.

This great problem must be forced into the foreground. Medical societies must take it up. We must discuss it in our journals. The columns of CLINICAL MEDICINE are

open to those who will give *practical* suggestions which may contribute to the solution of the problem.

Stop yer kickin' 'bout the times,
Get a hustle on you;
Skirmish 'round and grab the dimes
Ef the dollars shun you.
Croakin' never bought a dress,
Growlin' isn't in it;
Fix your peepers on success,
Then go in to win it.
Times is gettin' good agin—
Try to help them all you kin.

THE GREAT NEED FOR THERAPEUTISTS

The Journal of Therapeutics and Dietetics presents an idea which is so good that we trust our journalistic brethren will pass it around. It is expressed in these words: "In this day of specialism in all the various branches of human work there is a crying need that more of the medical fraternity fit themselves to become therapeutic specialists."

That is exactly right. If we need aid in the diagnosis of any part of the human body, from the crown of the head to the sole of the feet, we can find diagnosticians in plenty. But after their work is done, and we have fixed the disease, tagged it, registered it in our big book as a case of so-and-so, what are we going to do?

A number of years ago the writer took a patient to one of the leading specialists in a particular line in a large eastern city. We spent an hour together going over the case and fixed the diagnosis to the satisfaction of all concerned. Then I turned to the specialist and said, "Well, what are we going to do about it?" The great specialist threw up his hands and exclaimed, "Good heavens! I have not thought of treatment for the last fifteen years." I said to him that this patient had come five hundred miles, not to get a diagnosis but to be relieved. "Can you give me no help whatever in the treatment of this case?" But he could not. That was out of his line. He was a diagnostician, and that was all.

This is an instance of the extent to which European ideas have pervaded and poisoned the thought of the American medical pro-

fession. The ideal of "science" as something too lofty to be debased by any thought of utility is an exotic, which unfortunately has taken root here and, like the English sparrow, seems likely to drive out the much more worthy native production. The glory of American science was formerly its usefulness; now it appears to be its uselessness.

Nothing can be accomplished by a coward; everything is possible to the courageous. The realm of "you can't" is dwindling every year; its coast line is being eaten away by each successive surge of advancement. The greatest works of humanity are still incubating in the womb of time. They will be achieved by the "fools" who won't lie down till they have downed some lie.

—Kaufman

NOTE: THE "TEXTBOOK OF ALKALOIDAL THERAPEUTICS"

A new edition of this Textbook is now being prepared. We request readers who are in possession of the present edition to submit for the new one any suggestion which they would like to see incorporated in it.

If you have any additions to offer, send them in.

If you have any corrections to make, send them in.

If you have made trial of any of the suggestions in that book, and found that they are valuable, or that they are mistaken, or if you have unearthed exceptions as to their applicability, send them in.

What we want is the truth, the whole truth, and nothing but the truth.

We would not willingly or knowingly perpetuate error.

We do not want to leave out any single important fact or include a single error.

We would like to see this book made a composite of the knowledge and experiences of the entire "family" represented by the subscription list of CLINICAL MEDICINE.

Full credit will be given to every suggestion contributed and entered in the book.

Say what you want to say, and say it to Dr. Waugh.

Say it at once! now! today! while the matter is fresh in your memory. Don't put it off; for time flies, many important

matters employ your attention, and before you know it the new edition will be out, and your share of the work will not have been done.

TO OUR COLLEGES: WHY NOT TEACH ALKALOIDAL THERAPY?

The number of inquiries we receive from physicians asking where they can send students to learn modern active-principle therapeutics leads us to infer that any medical college which makes this a prominent feature of its course will largely increase its classes. Nine-tenths of our work is better done by the aid of drugs than by any or all the fancy methods yet devised; and nine-tenths of the people can not afford the prices exacted for the therapeutic frills.

THE ALKALOIDAL METHODS

Many physicians content themselves with adopting in their practice a few of the most popular alkaloids, substituting them for the older forms of the plant preparations; and go no further with the matter. These men rarely employ single remedies but "try" some of the combinations, and finding them successful, continue to employ them. The crumbs satisfy them—they miss the banquet.

The use of definite remedies is only the beginning. On this basis we build a new structure—the art of applied therapeutics. Beginning with the fundamental fact of having remedies that can be depended upon always to do exactly the same thing under the same circumstances, we have two branches of study opening out before us—just what is it that each of these remedies will do, and where is the opportunity to use it?

If men realized the supreme importance of this matter they would be devoting every minute of their life to these studies. The textbook of therapeutics would be committed to memory; the possibilities inhering in each active principle would be worked out to the ultimate, and hour after hour would be spent in the sickroom studying the patient, noting the operation of each physio-

logic function, recognizing the derangement, and searching for the cause whose removal would allow the currents of life to flow back into their ordinary channels. We should not have men asking what is "good for measles," but they would be anxiously inquiring for a drug to stimulate this function or sedate that one; the time a certain drug required to get to work, how far it should be pushed, and the indications by which full desirable effect might best be recognized. Our leading articles would tell of observations made to determine in what forms of hemorrhage atropine is effective, and why; whether berberine really contracts all relaxed connective tissue, how long it requires, whether the effect is permanent, etc.

Then the art of medicine, that of applied therapeutics, would speedily advance. There would be no going to sleep over a medical journal, but every statement made would be scrutinized by thousands of men, who would quickly detect a mistake or record an exception. Anybody who attempted to disturb deliberations of such momentous importance by introducing personalities would instantly be crushed by a roar of oburgations: "Shut up!" "Sit down!" "Get out!" "We are here to discuss matters of life and death; we've no time for trifles!"

Suppose that during the coming year we take up the study of twelve drugs and publish a symposium on one each month; taking those in which there is a diversity of view, or the newest and most promising recent additions:

March: Solanine; dosage; use in epilepsy.

April: Verbenin; general action; epilepsy.

May: Cactus; its place in therapy.

June: Intestinal antiseptics in summer diarrhea.

July: Copper arsenite and copper sulphocarbonate.

August: Nuclein; or berberine and hydrastine.

September: Gelseminine.

October: Aconitine, veratrine and gelseminine: comparative study.

November: Quinine arsenate compared with other quinine salts.

December: Conduragin locally in cancer.

January: Arsenic sulphide in infections.

February: Remedies useful in croup and respiratory catarrhs.

These are first-thought suggestions. Every one of these drugs has had claims made for it too important to be neglected; but all need to be tested generally to ascertain their place and limitations.

Any other suggestions?

Good thoughts (though God accept them), yet towards men are little better than good dreams, except they be put in act.—Bacon.

PUT AWAY THE MUCK-RAKE

With the passing of the present administration it is probable that we shall also see a subsidence of the great so-called moral wave which has been inundating the country during the last seven years. I am inclined to think that the change will be a desirable one—not because we have become too good or because the desirable reforms have all been accomplished. No—rather because of the spirit of philistinism that has arisen, which has made every strenuous man a reformer—of the other fellow. This constant looking for flaws and overlooking of virtues is not good. It engenders suspicion and hatred; makes men ready to see evil in others; anxious to pull down when they should be building up.

Our profession has doubtless gained much from the muck-raker—but it has suffered much. He came in with his "scatter-gun," as Wahrer would call it, attacking friend and foe alike, and so we are rent with differences, embittered by hatreds; instead of working together, as we should, we are split into factions while all the designing quacks and hare-brained cranks are taking advantage of our dilemma to undermine the confidence of the public in us and reap the golden harvest which should be ours.

Fights are enjoyable things! Every Irishman likes a fight—and I suspect that I have a strain of Irish blood. But we must not forget that "a house divided against itself

cannot stand." Popular confidence in our remedies has been shaken, and the doctor has lost faith in himself and his fellows. Unless we want the "forty thieves" of fantastic faddery to carry off our business we must begin to pull together, for there is no disguising the fact that the profession is poorer today than it ever has been, and is getting poorer all the time.

The muck-rake was probably good in its time and place—but we have had enough of it. The time has come now for constructive work. Let us forget our differences and set about the far greater work of rebuilding, building this time on stone.

If we want to recover the ground we have lost there are some things which we should do—at once:

Stop fighting one another. That's the first thing.

Open our minds to the reception of new truths, using them *ourselves* when they are good.

Show the people *how much more* we can do for them than the new quackery can—and with alkaloidal therapy the possibilities are not half realized, even by ourselves.

Antidote the poison of nihilism with real achievement, based upon an intimate knowledge of a real, live, up-to-date therapy.

Inject a little business gumption into our work; refusing to be deluded with and robbed by the falsities of pseudo-charity.

Work for our *own* interests, not for those of druggist, hospital, dispensary, medical college or any person or organization which takes money out of our pockets without giving a real *quid pro quo*.

Study the economic problems which confront us and force their consideration upon our societies and into our journals.

Isn't there a program big enough for the year? What will you do? What *can* you do?

OUR "LEADERS"

We have often asserted that there is nobody on earth who has a right to hold and express an opinion on the merits of drugs as used on the sick but the real, genuine

doctor; the man who gives the remedy and watches its effects at the bedside. Here is an example that you do not need anybody else to explain to you: Torald Sollmann is a member of the Council of Pharmacists and Chemists that is trying to tell us all what we shall and shall not use as medicines. What does he know about them? Well, he is the author of a fine textbook on pharmacology, including therapeutics, etc., and professor of those sciences in a university. But—is he also a real, sure-enough doctor? Just listen:

"Several fatal accidents have led to the practical abandonment of the internal use of aconitine in therapeutics."

What can the medical profession possibly have done with over thirty millions of aconitine granules they have purchased from a single firm in the last ten years? We conclude that Dr. Sollmann is here making a statement for which he can have no proof. Again to quote:

"The collapse action of aconitine is so strong that none of its other effects except the local anesthesia can be utilized."

And that when every second practitioner in America is utilizing aconitine every day of his life!—when we all know this alkaloid and use it as confidently and as safely as we would quinine.

Inspire all your patients and their friends with a spirit of confidence. Let there be no hesitancy nor doubt in your carriage or your conduct. If you do not know a thing, say so—but make it your business to know, so that you can speak out with the self-confidence born of that knowledge. Instill into the minds of those who are dependent upon you this thought: "Dr. Brown can help me if anyone can. He knows his business and I can trust him."

DIAGNOSIS BY INTUITION

The practice of medicine in these days of increasing knowledge and progress in medical science is a very different thing from that of our grandfathers' days. The conscientious work of the physician of fifty years ago looks like haphazard guesswork to the modern practitioner. Even as the nauseous potions and draughts have been replaced by accurate, positive medication,

so is the glance at the tongue and the feeling of the pulse being supplanted by the definite, precise methods of clinical diagnosis.

The young physician, just out of medical school and full of new thoughts and ideas, is taking the field, and, in many cases, because of his better and more practical laboratory knowledge, is seriously inconveniencing his older competitors.

Diagnosis by intuition is being supplanted by methods of precision, and rightfully so. The all-important subject of "finding out what's the matter" is becoming very much more complex work as the thorough method of investigation are now coming into vogue with the general practitioner. It requires careful and accurate laboratory work in addition to the methods of inspection, palpation, percussion and auscultation. It is admitted that this accurate work takes more time and probably more gray matter than the older slipshod methods; but undoubtedly both the patient and his doctor are the better off for it. In fact, the majority of failures among physicians today are due to one of two things: careless diagnosis or careless therapeutic methods.

The time will soon be here when the physician who does not carry out, either himself or by proxy, accurate examinations of the urine, gastric contents, feces, sputum, etc., will be a "back number."

The urinary examination presents many a sign-post which leads to plainer paths. Conditions difficult to understand are cleared up and the report gives definite information calling for as definite therapeutics; and often revealing unsuspected, but nevertheless important, conditions.

The test-meal is being more often used—yes, even by the general practitioner out in "the backwoods," and the advantages both to the patient and the practitioner are very apparent.

The relation of the condition of the feces and the bacterial flora growing therein has become a most important factor in diagnosis and, we hope, a matter that will soon find greater favor in the eyes of the practitioner. The original researches of C. A. Herter of New York and J. H. Kellogg of Michigan,

as well as that of Schmidt in Germany, Metchnikoff, Fournier, and others in France, not to omit Combe in Switzerland, are of very great interest, and it is to be hoped will serve to call attention more generally to the unpleasant but nevertheless necessary fecal examination.

Exactness in work pays big dividends. It may cost a few dollars or a few hours of extra work, but what is that compared with the satisfaction of *knowing*. Then, too, the reputation is very favorably increased by the impression made upon various people by the accurate, painstaking work that may be done, all of this in addition to the fact that accurate therapeutics is only possible with an accurate diagnosis.

The men who have achieved success are those who have worked, read and thought more than was absolutely necessary; who have not been content with knowledge merely sufficient for their present need, but who have sought additional knowledge and stored it away for the emergency reserve. It is the superfluous labor that equips a man for everything that counts most in life.
—A. Bright

ACTIVE-PRINCIPLE PHARMACY

All the pharmacy needed to dispense the active-principle remedies is to call for a glass of water, an empty glass and a spoon; the number of doses to last till the next visit is calculated and a spoonful of water is placed in the glass for each dose, then the requisite number of granules counted in, and in one minute the solution is effected. The directions should be carefully written down and then read to the person who is to administer the medicine, and he or she should then be made to repeat them so that there is no possibility of miscomprehension. Take nothing for granted. "Give a teaspoonful every hour till the fever breaks—do you know when a fever breaks?" What happens then?" "The patient cools off, the face is less flushed, sweating occurs, the pulse slows—do you know how to feel a pulse? Well, count mine."

And there is not much danger but that the directions are understood—because you yourself know what to expect and can tell

it to the nurse in language easy to comprehend.

Great heavens! What a relief has come to me through those two bits of knowledge—what to expect, and prescribing for the condition shown by the patient without having to wait for a name-diagnosis! I can see something that needs treatment, right now; and I know exactly what will relieve it. I do not have to wait eight days for a Widal. I do not have to wait eight minutes, but get at my duty at once, with open eyes, knowing exactly what I am about, for it does not make any difference what causes this fever—it is too high and must come down. The rotten breath means fecal matter, and that must come out. That pulse spells weakness and must be strengthened; and I will do these things while I am waiting to complete my diagnosis.

Next week the patient comes around to pay his bill. "Doctor, what was the matter with me?" You whisper in his ear: "Between you and me, as man and man, I don't know. Nothing but a postmortem would tell exactly. Do you want one, or are you satisfied that I cured you?"

The average man does not as a rule exhibit a very great anxiety to have a post-mortem diagnosis of his own case. He prefers to be cured.

CONFLICTS BETWEEN THE HEALTH BOARD AND THE PRACTICIAN

It is always deplorable when trouble arises between the health authorities and the general practitioner. All the more so because such a strife is utterly undefensible, results only in harm to both, and can easily be avoided by common sense on both sides.

The general practitioner has a right to complain of the numerous attacks that have been made upon his income of late. That of the Health Board is said to be a serious one. There is no excuse for any municipal authority undertaking to do for nothing what the regular physician is being paid for by people who can afford to pay for it.

On the other hand, the Health Office has right on its side. The writer was for years

connected with this work and knows what it means. Studying sanitation in its municipal aspects, it is impossible to avoid a certain sense of disparagement toward the general practitioner when the skilled sanitarian uncovers the latter's many deficiencies in this respect. How many times we have investigated the premises where infectious disease has developed and found sanitary conditions which it was difficult to believe that any man who had eyes and a nose could avoid noticing!

And, yet, for all this, the physician in charge had ignored them utterly. More than this, when the health authorities put the premises in proper hygienic condition, the immediate response in the improvement of the patient's general condition was too often likely to be attributed by the physician in charge to the last remedies that he had prescribed.

Nevertheless there is a right way of doing these things. The wrong one is for the municipal physician to ignore the rights of the physician in the case as well as his own ethical duty. The municipal physician, the hygienic expert should look upon himself precisely as would any other specialist. Because he is making a special study of these matters is no reason why he should feel contempt for the general practitioner who is not making such a special study. In fact, his relation with the case should be conducted on strictly ethical grounds. He should go to the family physician with his recommendations, go over the case with him, as in any ordinary consultation, determine with him as to the best measures to be adopted; in a word, he should work with and through the family physician.

What a simple matter it is. How easy to avoid all trouble. It is simply respecting the rights of the other man, and doing as he would be done by. We commend this view of the case to the serious consideration of Dr. Evans and his aids. If they will accept the suggestion, there is no reason why there should be any trouble whatsoever between the Department and the general body of the profession.



THE SOCIAL EVIL AND ITS REMEDIES

This paper, which was read before the Medical and Surgical Society of Louisville, Kentucky, is a direct arraignment of the social conditions which are responsible for society's greatest vice

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II

VICIOUS and illogical training of youth is one of the feeders of prostitution.

Boys are taught by older men that fornication—that even masturbation—is manly, even that it is necessary. Such training, associated with ignorance of sexual physiology and the ebullition of undisciplined sexual impulses at the age of puberty, is most disastrous in results. The Lie of the Wild Oats is the reef on which many a youth's life has been wrecked. The belief is quite general that every youth of stamina "must sow his wild oats." Some go so far as to say that he cannot amount to anything unless he does sow more or less of them. Women have been heard to say that penitent rouses make the best husbands, not recognizing the fact that where one man is strong enough to overcome his evil experiences, a hundred are wrecked, morally and physically.

That the average young man sows plenty of wild oats in the present conditions of society is indisputable. That the more substantial and manly men are often the ones who have paid particular attention to their sowing is true. That some men who have never sowed any were not much to

begin with is also true. If fear or lack of animality had not been more prominent in such men than in their erring brothers they would have joined their ranks. That some "goody-goody" young men, who have never been tempted, fall into evil ways later in life cannot be denied. That penitents often make good husbands is a matter of common observation; whether they have been scared into good behavior or have simply matured in judgment matters not.

On the other hand, many young men who might have been ornaments to society have been ruined for life by wild-oats sowing. That any man is better for wild-oats sowing save where its terrible results bring a naturally weak and vacillating character to his senses through psychic shock, is false. "Boys will be boys," you say. Oh yes, dogs will be dogs; but does this lessen the virulency of hydrophobia? The wild-oats theory was probably invented by a fake social philosopher who had sins of his own to apologize for and no disease acquired by early indiscretions to modify his opinions. It could hardly have been invented by a maimed debauchee who had chiefly painful recollections to lay on the altar of memory.

Almost every boy at some time in his life is taught by his elders the Lie of the Wild Oats. His father and grandfather learned it before him, and followed where it led. The man who escapes its dangers does so by great good luck or by virtue of a strong organization, moral, mental and physical, that nothing can shake. That any man who sows can altogether escape reaping is a fallacy. Physical, mental or moral scars remain, and while the world may be satisfied with him, he is never satisfied with himself.

Man's sexual lapses in after-life often are due to his chasing some psychic will-o-the-wisp; some youthful experience which, like the circus of his boyhood, seems ideal. Impressions made at a period when the emotional organization is especially plastic leave a memory that overshadows all its future life as a false ideal. The grown man may not know it, but his pursuit of sexual pleasure that is always just beyond his grasp is an unconscious chase for an ideal that no longer exists. His erotic desires are a reflex from a psychic scar that will never fade nor become dulled in sensitiveness so long as his physical sexual capacity remains unimpaired.

Shall youth be exposed to debauchery to strengthen it? No, a thousand times no! Protect youth from wild-oats influences until its judgment is mature, and there will not be so many brands to be plucked from the burning. Inasmuch as women have written themselves into the wild-oats conception of the male, here are a few pictures for them—pictures only too familiar.

Some Familiar Pictures

Picture 1. A certain health-resort—the sink-hole into which a large part of the immorality, crime and disease of America is dumped—has a hundred-thousand visitors annually. Of these a large proportion go there to harvest their wild-oats crop. Visit one of the government “rale-holes,” defender of wild-oatism, and tell me how you like the “harvest.”

Picture 2. A hospital. Here is a group of locomotor ataxics; there a group of deformed children; yonder a girl in her teens

is nursing a child who is not wise, for it knoweth not and ne'er will know its father. More wild oats!

Picture 3. An asylum. Here is a case of general paresis; there a melancholiac; in the next room a maniac can be heard shrieking. Wild oats a-plenty!

Picture 4. A jail, full of drunks, criminals, bums. Wild oats again!

Picture 5. Another jail. Here are wild oats of the striped, short-haired variety in abundance!

Picture 6. A foundlings' asylum full of children, cursed, before they were born, by society's cruel term, “bastard.” Poor little wild-oats!

Picture 7. A doctor's office, full of anxious men, and still more anxious women, who do not gossip much about their ailments, even among their intimates, save where the women are told by the doctor a euphonious fairy-tale for home use. Wild oats growing in the dark!

Picture 8. A brothel. Around the “reception room” sits a collection of poor devils, many of whom were originally sacrificed in aiding our youth to sow its wild oats. They are now getting poetic revenge, as the doctor knows!

Picture 9. A beautiful girl found dead in the river one fine morning. What was she doing there? Washing the wild oats out of her life!

Picture 10. A pistol shot rings out in a gambling hell—a man falls dead. The gun was loaded with wild oats!

Picture 11. A bank cashier flees to Canada. He is looking for a market for his wild oats!

Picture 12. A series of deserted babies are found in the snow. Who planted them there? Will wild oats grow in the snow?

Picture 13. A wife, surrounded by hungry children, is sitting weeping, eating her heart out. John is on a drunk, he has whipped her, is in jail, or has deserted her. Wild oats are not a poultice for a broken heart; they are not food for babies; they do not buy coal nor cover nakedness!

We doctors know the wild-oats crop under numerous terms. Crime, inebriety, syphilis,

paresis, locomotor ataxia and gonorrhea are chief among them. What the consultation room does not tell the operating table does. The woman who prefers the graduate of the wild-oats college would better look at the pathologic specimens taken by the surgeon's knife from innocent wives, and see how they tally with the wild oats of some husbands' youth.

There are thousands of syphilitics in every large city in the world. Add to these the other wild-oats products: crime, prostitution, inebriety, insanity—all the conditions of degeneracy—and we can never off-set the frightful record with an occasional brand plucked from the burning, or "burnt child who dreads the fire."

Viciousness of the Double Standard

The Lie of the Wild Oats is based upon the misapplication of the separate standard for men and women. The young man may sow his wild oats, but the young woman must not. As the sowing of a certain variety of wild oats by the one sex necessitates the cooperation of the other, I cannot precisely follow the line of reasoning.

What made the thousands of prostitutes in every great city? What supports them? What keeps the supply equal to the demand? Wild oats, my friend, wild oats! Wherever immorality, vice, disease, crime, drunkenness and insanity most thrive, there, if we dig down to the very roots of these evils, we find the wild oats the thickest!

The gray-heads who learned the wild-oats lie from society's primer know full well that the wild oats of yesterday are watered with the tears of today. Their vicious roots lie deep in the ashes of despair. They are garnered with the sickle of regret and threshed with the flail of disease and pain.

The Social Evil and Degeneracy

Of late years it has been quite the fashion to attribute prostitution almost entirely to degeneracy. This is, in my opinion, a very narrow view. Even if it were proved that prostitution is always due to degeneracy, would our measures of prevention and cure be any more effective if we limited ourselves

solely to the conditions underlying degeneracy?

Prostitution and its attendant evils demand attention in our own generation. The prevention of degeneracy demands many years and measures which are at present impracticable. It is beyond the purpose of this paper to go into the question of degeneracy in its relation to prostitution further than to say that its influence has been greatly overrated. In estimating the influence of degeneracy in the etiology of the social evil, a very important source of fallacy lies in the fact that if exposed to the same environmental influences that were primarily brought to bear upon a given individual who has entered the ranks of public women, no woman would be likely to escape downfall were the influences brought to bear at the same period of life.

Degeneracy should be given a place in the etiology of the social evil, but we must recognize the fact that its causes embrace every aspect of human nature and every phase of our social and economic conditions. The history of prostitution, like that of crime, is interwoven with every human interest. It is an integral part of the history of every nation. So comprehensive are the causes of prostitution that it would be impossible to present them fully save in a work of encyclopedic pretensions.

Prostitution an Incurable Social Disease

The same measures that tend to prevent crime by correcting or preventing degeneracy necessarily apply to the prevention of prostitution; but moral, educational, physical, industrial and social measures of prevention and cure are much more rational and effective in their application to prostitution than to crime. Considered as an entity—as a social disease—prostitution may be said to be practically incurable under existing conditions. All efforts in the direction of cure have thus far been signal failures. Very little has been accomplished even in the prevention and amelioration of the evil. That moral, legal, social, and medical methods of management have done much good is admitted, but the good has been

individual and sporadic. Prostitution as an institution has not experienced the slightest effect from the labors of the moralist, social philosopher, legislator, physician or church. Neither the proportion of prostitutes nor that of syphilitics and gonorrheics has lessened, so far as the world at large is concerned, whatever may have been accomplished in certain localities.

The immediate suppression of the social evil under present conditions would probably result in social disaster. The debauchery of the vile is in a sense the salvation of the virtuous. That there is very little sentiment in this statement, I am well aware, but I am discussing actual social conditions, evil though they are. To discover a soul of good in things evil and irremediable is by no means an apology for the evil.

The remedy for the social evil lies, not in suppression but in mitigating its effects, in the first instance, and secondly, in correcting so far as possible the causal conditions underlying it.

Education of Youth the Keynote

Prevention of prostitution is the keynote of its management. The first essential is the education of the youth in sexual physiology, correcting vicious notions derived from depraved men and women, the punishment of adults who are known to corrupt the morals of youth, imparting a knowledge of the horrors of venereal diseases and cultivating a healthful selfishness.

In considering the sexual education of the youth, I desire to go on record as opposing the notion that the male and female should be educated in precisely the same way. I will also state unhesitatingly my belief that literature is sometimes published for alleged sexual educational purposes which is primarily intended to pander to pruriency. There is much that is necessary in the sexual education of boys in the better grades of society that would be superfluous and indecent in the training of girls of similar social status. Innate hereditary and acquired depravity, vicious training and example are more powerful in boys. The normal social atmosphere of girls is

relatively pure and sexually repressant, the reverse being the case with boys. In the more degraded classes the environment of girls is quite similar to that of boys, although even here there is some difference. In the lower social strata educational measures will fail unless such children are removed from their vicious surroundings.

As matters stand at present, the growing lad comes to regard sexual purity in the male as something to be ashamed of, and female virtue as extremely out of fashion. This applies, of course, mainly to the city boy.

That sexual indulgence is a *sine qua non* to manliness is one of the foundation stones of the ethics of the city youth. Boys should be taught self-control. We should endeavor to convince them that to control one's appetites makes a man a king among men, but that allowing his appetites to control him makes him a slave who can never enter his birthright. When we reflect that Confucius, many centuries before the Christian era, expounded this doctrine as part of his creed, one can see little of which Christian nations should boast.

If boys can be taught that the ideal of manhood is physical perfection, and that early sexual indulgence impairs their chances of attaining the ideal, much may be accomplished. Such an appeal to the selfishness of youth may accomplish more than any amount of preaching. Boys should learn the dangers of venereal disease. Free museums of anatomy and pathology, with exhibits of the severer forms of venereal disease, should not be monopolized by quacks and pretenders, whose object is to terrorize and rob. Such facilities for demonstration should be established and maintained at public expense.

The Physician as Instructor

Upon the physician devolves the major part of the duty of instructing the public in the delicate matters germane to sexual vice and crime. He has always neglected and probably always will neglect his duty in this direction. The so-called ethics of medicine has limited the sources of public

instruction to charlatans and quacks. Here, again, is the soul of good in things evil, and the warning to youth imparted by quack literature is sometimes better than nothing, even though the object of the quack is venal. The public cannot be blamed, it must get its information as best it can; and while the layman dearly loves to be quacked, he is often open to information from reliable sources. Out of the indifference and ignorance of the reputable medical profession the world-wide prosperity of the quack is born.

Physicians should be encouraged to write and judiciously disseminate among the public dignified and discreet treatises on various sexual and venereal topics. The more advanced pupils in our boys' schools and colleges should be taught not only sexual physiology but the elementary principles at least of venereal pathology. The adoption of this plan will be the deathblow to the quack, who prevents syphilis from getting into the blood, or cures it in ninety days, or who thrives and waxes fat on spermatophobia.

(To be Concluded)

CACTUS GRANDIFLORUS: A CARDIAC REMEDY*

This is the record of the experience of a physician who has used this much-discussed remedy in very many cases, and as a result is absolutely convinced of its great value in many disease-conditions

By ROLAND G. CURTIN. M. D., Philadelphia. Pennsylvania

I HAVE been using *cactus grandiflorus* more or less constantly for the last thirty years; or, at least, ever since the appearance of the article written by the elder Dr. A. Flint of New York. I have had a large experience, and I feel that it is a very valuable remedy which the profession generally do not appreciate. There is no drug that has been so enthusiastically extolled by a number of the profession, and quite as vigorously denounced by others as being entirely valueless as a remedy.

The experience that I have had makes me feel that this drug, if of good quality and properly used, should have a better name; for the more I use *cactus grandiflorus* in selected cases, the greater grows my confidence in it, and I feel satisfied that this remedy has a place in cardiac therapeutics.

I have used it for many years; but after reading some of the experiences of experimenters whose reports seemingly disclosed the fact that it was almost or quite worthless, I ceased using it for a time. However, I soon found that I had lost the assistance

of a good faithful remedy, and returned to its use. I am now more convinced of its usefulness than ever before.

Too Much Is Expected by Many

The great trouble with many physicians is that they expect too much from this remedy. They think it should cover the whole field of cardiac therapeutics. If they have a case with a faltering heart, a heart that has defied the usual strong remedies, they try *cactus grandiflorus*, and because it does not immediately strengthen the exceedingly weak and perhaps dying heart they at once condemn it as being of no good whatever.

This is not fair, for under the circumstances just cited it is, as it were, using a needle where a crowbar is needed. No one who has been properly instructed in cardiac therapeutics would call *cactus* a powerful tonic for the heart; for such is not the case. It is a mild cardiac tonic, a supporter and a steadier of that organ when in a weak and irritable condition. It is more like a persuader than like a tractor; largely a regulator, not a mainspring. To use *cactus* when digitalis is indicated shows bad judg-

*This article is reprinted from The Therapeutic Gazette, Nov. 15, 1908.

ment or a want of knowledge. It is sending a small urchin on an important mission that only a man is fitted for.

This remedy will not favor the production of hypertrophy nor draw in the walls of the heart in dilatation, as will digitalis; neither will it change back to a healthy condition degenerated muscular fiber, and it has very little influence as a diuretic. I feel, however, that when given intelligently, in some of the minor ills of the heart, cactus grandiflorus will do much good. Its use in conditions to which it is not adapted has probably been one of the causes of the small favor in which it is now held. I know that it is a valuable remedy, *more especially when used in combination with other heart tonics*, lending valuable aid to their action.

It Is a Harmless Remedy

It will greatly assist other remedies in severe cases, and will not do harm, as some other heart remedies may. It is well borne by the stomach, is effective after long usage, and has no cumulative effect. It is not good in every heart condition, but it has its proper place in cardiac therapeutics, and when used in selected cases is a very useful remedy.

It can be used for an indefinite length of time without doing injury to the stomach, the nervous system or the heart. In simple nervous cardiac weakness, with irregular or tremulous action, it is of great benefit. One additional advantage that it possesses is that in large doses it has no poisonous action. It is a safe remedy. A beneficial remedy usually becomes injurious when used to excess, but this is not true of cactus; and if it does no good, it can do not harm—which is not the case with some other remedies that are given for heart affections.

In none of the cases in which I have used cactus grandiflorus has it seriously disturbed the stomach, except in that of an old woman who seemed to have an idiosyncrasy that prevented her taking this as well as many other remedies.

At first I used to give it in the form of a fluid extract, five to ten drops four times a day. Later I used a tincture, fifteen to twenty-four drops, and during the last four-

teen years I have used the extract in pill form, generally associated with other cardiac remedies.

Only a True and Pure Article Should be Used

I feel assured that when one can get a *good, pure article* it makes but little difference in what form one prescribes it. I feel satisfied that much of the ill repute of this drug comes from "substitution," or the dispensing of an inferior article, often made from other varieties of the cactus family, which are much less efficient.

My experience leads me to believe that it is useful in palpitation of the heart, and in irregularity, whether from the abuse of tea or coffee or of alcohol; also when the irregular heart is associated with heart-strain or any other condition, including dyspnea, hysteria and hypochondriasis as well as all emotional irregularities of the organ. It is sometimes beneficial in Graves' disease, when the heart is weak, irregular and rapid. In functional troubles it is particularly useful; and in the disordered heart associated with and following influenza I have found it of great value, as well as in cardiac asthma. It gives aid and comfort to the aged who are suffering with disturbing circulatory symptoms, such as dyspnea, asthma and a sensation of weakness in the organ. Given with nitroglycerin in such cases it adds much to the effectiveness of the latter. It is used with good effect in the convalescent stage of exhausting diseases, strengthening the weakened heart, the patient often being cognizant of the great comfort afforded.

When properly administered it is a good remedy in irritable heart, even when associated with aneurism, when digitalis would do positive harm, as it moderately strengthens and slows the heart and seems to control its action. When there is an excited and bounding pulse this drug sometimes soothes and quiets it by apparently lowering the cardiac tension. Many patients after using this drug say: "My heart now feels comfortable."

Dr. Finley Ellingwood of Chicago (*Medical Record*, 1905, vol. lxvii) says: "In its administration a small dose will accomplish

all the desired results; and observers unite in the statement that large doses are in no way better than those of from two to five minims of the fluid extract." He also states, in the same article, that "cactus improves the nutrition of the heart. It improves the contractile power and energy of that organ, elevates arterial tension, and increases the height and force of the pulse-wave." He further says that it relieves the asthma, and he especially recommends it in atonicity alone—not for exaltation of that organ. He also uses it in excitement of the heart with a feeble pulse. Professor Ellingwood further says that no combination will take its place.

Potter reports that this drug was studied physiologically by Myers, who found that it possessed a decidedly stimulant action on the heart, the arterial tension and the spinal motor centers.

Engstad (*Therapeutic Gazette*, Sept., 1890) considers it superior to digitalis in functional disorders, especially angina pectoris, for which it is almost a specific.

J. Fletcher Horne (*Lancet*, Dec. 5, 1891) says that its action appears to be on the cardiac center of the medulla, and thus, through the vagus and sympathetic, to the heart. He also states that it has a sedative action, lowering arterial tension without the dangerous depressing and paralyzing effect of opium and chloral, or even of belladonna, and that it invigorates the cardiac plexus and improves the nutrition of the heart, as shown by the increased tone of the pulse.

P. W. Williams (*Practitioner*) states that it acts chiefly upon the accelerator nerves of the heart and the sympathetic ganglia, shortening the diastole and stimulating the spinal vasomotor nerve-centers.

Rubini of Naples says it is the counterpart of aconite.

A. R. Cushny says it has no action similar to that of digitalis.

Dr. Gordon Sharp of Leeds writes in a paper (*Practitioner*, 1894, p. 157): "This drug does not possess any stimulant action on the circulation of the kidneys. The slight stimulant action of the resins in the drug is the cause of the increased secretion;

and this action is all the influence it has." He is of the opinion that it is of no use as a circulatory remedy; and further, that the resins are the only active part of the drug, and that even those have only a faint action upon the kidneys.

Is there a cause for such diverse reports? Have they all a good, proper specimen to experiment with? Why should one experimenter say that it is an effective remedy and another say that it is inert?

Best Given With Other Cardiants

What I desire especially to call the attention of the profession to in regard to this remedy is its importance in cardiac therapy, *when given with other cardiant remedies*. One will often obtain some of the most marked results, much more marked than when the remedies are given independently. It seems to fill a niche in cardiac therapeutics that is quite unique. I have frequently given other remedies for a considerable length of time, with little or no effect; but when I have added cactus I have obtained the most happy results. It seems to be most effective when given in full doses with other heart remedies that are used in frequent small doses. I give it in this way in cases of organic disease with much circulatory disturbance, in connection with digitalis, nitroglycerin, caffeine, strophanthus, strychnine and atropine. Its prolonged use with arsenic and pyrophosphate of iron seems to increase the tonic effects of these drugs in heart-cases.

I have frequently observed cases in which a full dose of digitalis caused nausea and vomiting, but in which, when the dose of digitalis was reduced to one-half and cactus added, the nausea disappeared, and the good effects of both medicines were immediately noticed. In fact, the result was quite as good as, if not better than, would usually follow the full dose of digitalis. In this connection I would state that I think much of the stomach derangement from digitalis comes from the use of too large doses. In many cases, if half the dose is given and the interval diminished one-half, there will be little or no nausea, and better results

from the medicine, for we then get a continuous and even action from proper absorption of the drugs.

The Action of Cactus Explained

It seems to me that cactus stimulates the motor, but more especially the inhibitory, nerves of the heart. It strengthens and improves the systole, increases the muscular energy of the heart, and increases the tone of that organ.

It is often a great comfort to the person suffering with nervous palpitation or irregularity, as it tones up the heart and takes away the disagreeable feeling of weakness that often is present. Its primary action seems to be confined exclusively to the heart, giving that organ increased power by strengthening the motor-nerve forces and exerting a marked governing influence upon the regulating nerves. We are told by some that it raises the blood-pressure. If the heart is slow and weak, cactus accelerates it; if weak and rapid, it seems to have a subduing and quieting effect. Its action upon the controlling nerves of the heart is to steady them and thus prevent intermittence and irregularity, more especially in functional cases; but often good results are obtained in old or recent organic heart disease when cactus is used in conjunction with other remedies.

I have often observed a more tonic effect upon the heart from three minims of tincture of digitalis combined with fluid extract of cactus grandiflorus, five or ten drops, and caffeine one-fourth to one-half grain, than from a large dose of digitalis by itself. Its effects are more lasting than those of other cardiac tonics, such as nitroglycerin and caffeine.

While the action of cactus grandiflorus is, as I have stated, confined to the heart and nerves, it apparently affects the kidneys also; but this action, I think, is no more than should be expected from the improvement in the general circulation. In the same way all the tissues seem to be better nourished. It is not a strong general tonic, but a soothing upholder of the heart and a husbander of its strength. Perhaps the best

description of the action of cactus on the heart would be a calming, regulating, mild heart tonic; although in organic disease of the heart, such as valvular disease, dilatation, degeneration of the walls and myocarditis, when associated with nervous phenomena, such as irregularity and excitement, it is a very valuable adjunct to the stronger heart remedies. In grave cases, however, it should not alone be depended upon.

As illustrative of its uses I shall cite three of the many cases in which it has been given by me in combination, with decided advantage:

Some Cases in Point

Case 1. A boy with marked mitral disease and dropsy had been taking digitalis and other remedies for a period of two months, without much effect. When cactus was added to the digitalis, caffeine, etc., he began at once to improve in every way. The heart commenced to tone up, and the functions of the liver, stomach and kidneys improved. As the strength of the heart increased, the dropsy disappeared. This case shows the benefit sometimes derived from combining cactus with other remedies in medicating the heart.

Case 2. Mr. A., who had an old, degenerated heart and was greatly troubled with palpitation and markedly conscious of the heart-action, had tried various sedative and tonic heart remedies without much seeming result. Finally he was wonderfully benefited by the use of cactus grandiflorus, when combined with nitroglycerin. He said that the pills always gave him immediate and great comfort. He had previously been using the nitroglycerin, with doubtful effect.

Case 3. Dr. S. had marked intermittence and irregularity of the heart, following a severe influenza attack. This continued for many months. He used all sorts of cardiac remedies in vain. I gave him a pill containing extract of cactus grandiflorus, digitalis and citrated caffeine, which had the effect of immediately correcting the trouble. I gave him the last two ingredients in small doses. He was quite an aged man, with a weak heart, possibly degenerated. For a

long time he had ceased smoking; but when he began to smoke once more his heart at once became irregular and intermittent. This happened every time he resumed smoking. He discovered, however, by experimentation that he could smoke without the occurrence of this trouble if he took, at the same time, one of these pills. About a year later I met him in a street-car, and he said, taking a small bottle of pills out of his pocket: "I can, with these, take comfort in my smoke. Thank God for Dr. Curtin's pills, as they enable me to use tobacco again." He had experimented with digitalis, caffeine and other remedies without the cactus, but they did not afford him relief.

I have noticed that those who have used cactus grandiflorus beyond the experimental stage have faith in it, while those who employ it least condemn it as useless.

Conclusions

1. Be sure that a good reliable specimen of the drug is secured, one that has the proper strength; in other words, one that can be depended upon to do the required work.

2. Cactus is a mild tonic stimulant for the heart, especially acting upon the inhibitory nerves of that organ, relieving it of some of the unpleasant symptoms such as we often find in the nervously diseased heart. In any case it may subdue the discomfort and some-

times permanently relieve the pain in the region of the heart.

3. It is a valuable adjunct to the other well-known heart remedies by steadying the heart and aiding its tone, and helping to support the weakened organ. I want to emphasize one important point: remember that it is not a strong cardiac tonic or stimulant, therefore it should not be alone depended upon in a seriously diseased heart.

4. Those who expect it to take the place of digitalis do not, in my estimation, know the action of the two drugs, as they are essentially different in their action. Furthermore, cactus is in a class by itself, not being like any other heart remedy.

After presenting the foregoing paper I received the following letter from Dr. R. W. Wilcox, of New York City, which explains itself:

In connection with your paper on "Cactus" I would say that I have satisfactory evidence in my possession which shows that the investigator whom you quote as having found cactus absolutely inert by his experiments never even saw any cactus until after his report was published. Although his attention has been called to this fact, so far as I know he has never corrected his statement. If one cares to make use of a fluid extract of cactus, such as may be obtained without difficulty in the pharmacies, his sphygmograph will show (a) a more rapid pulse and (b) increased blood-tension. This can be demonstrated without difficulty, and all laboratory experiments either ignorantly or purposely showing the opposite are only reflections upon the scientific honesty of the reporter. Clinical experience is the crucial test, and that is the final word. Sincerely yours,

REYNOLD WEBB WILCOX.

SONG OF SUNSHINE

What though the day is dull and drear
And in its casket hope lies dead,
We laugh to dash away the tear
And summon courage as we tread;
No need, the sunshine overhead,
To bring the thrill of Cupid's dart,
For clouds are naught and fear has fled
When there is sunshine in the heart.

A mood, which mayhap brings us pain
Will guide our pathways now and then;
A quest for words of praise, in vain,
May cast us down with other men,
But though the storms ahead we ker,
There naught can utter gloom impart
Nor love leave off and hate begin
When there is sunshine in the heart.

Alas, the fickle sneer of he
Who seeks his laurels in our woe!
His end has failed of victory
By simple courtesy we show—
No need, when sorrows come and go,
To quail and flee misfortune's art;
The sighs are but the smiles we know
When there is sunshine in the heart.

FRANK W. TAYLOR, JR.

EXCESSES IN SURGICAL CLEANLINESS

While it is essential that a patient prepared for a surgical operation should be clean, we should be careful that in our zeal we should not do harm.

Dr. Austin points out the dangers from excess

By MAYNARD A. AUSTIN, M. D., Anderson, Indiana
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THE amateur surgeon, and for that matter a number of others who have passed the amateur stage in professional surgery, are frequently seen to use excessive zeal in their efforts at cleanliness, while their work is altogether too frequently complicated by inflammation. To see the way some men clean up a part, one would think them laboring to remove not only the dirt but the skin itself.

Surgical Cleanliness Easily Secured

During the last five years I have had ample opportunity to prove that surgical cleanliness can be secured in practically every case with a minor amount of effort and an absolute repudiation of the scrub-brush. Formerly the scrub-brush was an important part of my equipment. It has since been superseded by a piece of cotton or gauze, and the vigorous manipulation that abraded the skin can now be looked upon with pity, and thought of only with regret.

In many hospitals much of the work done is on surgical patients brought to the clinic unprepared so far as the seat of the operation is concerned. The patient is shaved and cleansed upon the table. If the surgeon, whose hands are notoriously dirty, can prepare them in ten or fifteen minutes and can put them into any bodily wound with small chances of infection, how much better opportunity have we to gain a clean result when the seat of operation is never so dirty as our own hands.

During my internship the patient was frequently prepared by shaving, scrubbing and what-not, forty-eight hours in advance of the operation. Bichloride applications were then made, with the result that in not a few cases the field was covered with

pimply blisters, the result of the mercurial action on the skin. Later in my service we prepared the patient the night before the operation, leaving the part covered with a soap poultice and had the patients awake and worn out by their night's contact with this fiery application.

Excessive Cleanliness May Cause Infection

I can look back and see many cases which I believe to have been infected directly by excessive cleanliness; that is, the excessive scrubbing produced a *locus minoris resistentiae* and the digging in the skin opened up and stimulated to growth pockets of bacteria that would have been innocuous under other circumstances. It requires several minutes' contact for alcohol, ether or carbolic acid to affect certain pathogenic bacteria, and the time will undoubtedly come when our extraordinary manipulations will seem as crude as the application of iodoform. If we have an infected wound a little powder on the skin is not going to kill the infection. If we have an infected area on the outside a little ether or a little alcohol is not going to kill the germs in the time it is usually allowed to remain; that is, it is commonly poured on and immediately wiped off.

After observing the work done in nearly every large clinic in the United States and Canada, watching operations by men without gloves, by men without gloves but with gloved assistants, and by gloved operators and gloved assistants, and getting direct information as to the actual results following operations, I cannot feel any more safe with gloves than I do without them. If everyone in the operation wears sterile gloves they certainly have an advantage in operations requiring other than the hands of the opera-

tor in the wound. Again, it is advantageous for all hands to be gloved when one is not certain of the personal ability to obtain surgical cleanliness in one's assistants, when one is operating away from his customary surroundings.

A careless gloved hand will become infected as easily as one without glove, and the operator without gloves who insists on his assistants wearing them acknowledges their lack of training and his own perfection in detail.

The "knife-and-fork surgery" advocated some time ago by one of our German surgeons is ideal but impracticable. The finger's end is often of greater value than eyesight and our efforts in the direction of cleanliness should be such as would permit us to use our fingers uncovered and in any place. Some surgeons assert as a possible fact that they can use gloves with no lessening of the tactile sense. Such an assertion is questionable. Their work may be just as good with gloves as without them, and yet their work, on the other hand, may not compare with some who use and many who do not use gloves.

What All of Us Can Do

All of us do not have the time, the means or the opportunity to make such careful study as we should, in order to get an accurate knowledge of the true value of the

socalled antiseptics; but all of us have the time to read such an article as that of Dr. Harrington's, published in the October number of the *Annals of Surgery*, 1904. Many persons seem to believe that we are capable of securing and maintaining an absolute degree of asepsis in our surgical work, and to proclaim different ideas than this might even

provoke serious discussions.

A series of experiments were made by Dr. Harrington in the operating room. Sterile Petri dishes were placed in different portions of the room and near the field of operation. A dish that was exposed during the time needed to operate upon a case of hernia, and placed upon the instrument table, showed that every square inch produced not less than one hundred and twenty organisms, chiefly *pus cocci*. If such a shower of bacteria constantly falls upon



DR. MAYNARD A. AUSTIN

our table, our hands, our instruments and the field of operation, nature must be thanked for her assistance as much as our own efficiency when we secure a wound healed by primary intention.

Dr. Harrington also made some experiments in regard to the sterility of sweat. Sweat is considered one of the sources of infection that is tolerated by those who do not use gloves, and has been the main argument for those who do. Dr. Harrington makes this statement: "Six different times in my

laboratory sweat has been made to flow from well cleaned and, so far as is possible, sterilized forearms and hands, encased in sterile glass cylinders heated by appropriate means; and in not a single instance could a bacterial growth be obtained." He further made a series of experiments injecting fairly large amounts of sweat into animals subcutaneously, intravenously and intraperitoneally, and all proved negative. No one questions the fact of the presence of bacteria on the skin, yet they occur in the deeper as well as the more superficial layers, but most of those present are not pathogenic.

The Danger from Assistants and Spectators

The chances of infection are far greater if one has an assistant or there are many observers to an operation who persist in talking or carrying on irrelevant conversations. The saliva is probably the richest source of infection we have to deal with, and Fluegge of Breslau investigated this matter as thoroughly as Dr. Harrington investigated the matter of the skin cultures. "Ordinary conversation is accompanied by the constant ejection of salivary droplets, especially aggravated where consonants are numerous. In one series of experiments the average number of organisms per droplet of saliva as cast out in ordinary speech proved to be no less than 4375."

A number of other experiments by Dr. Harrington goes to show that our chemical antiseptics, as we use them, are little more than a farce. The staphylococcus aureus and albus require ten minutes' contact with corrosive-sublimate solution of a strength of one in one thousand before they are destroyed. The above-strength solution is as strong as it is safe to use, but no one would think of using it for ten minutes, which is the shortest time it could be used with any effectiveness. Five-percent carbolic acid is impotent if used for less than two minutes. Five-percent formaldehyde requires twenty minutes, while a saturated solution of potassium permanganate requires fifteen minutes for staphylococcus destruction.

Realizing the above facts to be correct and scientifically proven and on the other

hand admitting that our surgery can be aseptic in its results, the resultant fact can not be other than our means and method are experimentally futile, yet practically perfect. On the other hand, the man who is so excessively anxious that he goes to the extreme in all his work to secure sterile results, *has no better success than the man who is thoroughly clean and who uses no antiseptics of any kind.*

If we, who have to do the most of our work in kitchens, bedrooms and house-to-house operating, can get clean results, as we are doing, much of the work and worry incidental to a hospital case is needless. Abdominal operations can be done with thirty minutes' preparation as successfully as when it took thirty-six to forty-eight hours, *so far as the site of operation is concerned.*

My Own Method of Preparation

In my work, the patient having been shaved by an assistant, the abdomen is macerated, with green-soap friction, for ten to fifteen minutes. While macerating the abdomen my own hands are receiving the benefit of the soap application. The surface of the abdomen is then flushed with sterile water, and a little alcohol or ether is used to dissolve out any remaining particles of soap. Alcohol is poured over my hands for the same reason and to do away with the slippery feeling, but not with any antiseptic expectancy. Using no gloves my hands are washed frequently in a bowl of sterile water *and each time carefully dried*, before reentering the wound. This simple technic gives me clean results in clean cases; and the same plan is used in the log-hut as in the operating room of St. John's Hospital.

Soap and water are sometimes aided by the application of benzin or gasolin when factory-grease is to be contended with. Recently I have used alcohol denaturated with benzin for a similar purpose, but a series of results have caused me to hesitate in using this excessively. I had a number of cases of various sorts of injuries that failed to heal. There was no suppuration and no evidences of inflammation. The

wound simply did not close primarily. In all these cases I had moistened plain sterile gauze with the alcohol and applied it to the wound. Since discontinuing these applications my wounds are again healing by primary union.

Lawson Tait secured results that are equally satisfactory with those we get today. "He washed things clean." This degree of cleanliness must go to a certain point, otherwise infection is certain. If carried too far, the natural resistance of the tissues will be injured, avenues of infection will be opened up, and we are no better off than we were before we knew so much about bacteria.

Some Unsatisfactory Cases Explained

It has been my misfortune to have within the last year four cases in which clean laparotomy wounds opened up and necessitated extra care and additional hospital expense, and for which no cause could be definitely located. A communication from Dr. C. A. L. Reed to *The Journal of the American Medical Association*, dated November 30, 1907, explains the situation. He says: "My experience has been to the effect that heavy and hard catgut, chromicized to last twenty days, is very liable to last forever unless it is removed. It has not, in my experience, been the cause of any infection whatever, but it has repeatedly been the cause of a chemical disintegration of the tissues, resulting in the formation of a sinus and the seemingly interminable discharge of chromicized and

consequently entirely sterile serum. When this exosmotic current is once established, absorption obviously becomes impossible. Even the smaller strands, Nos. 0 and 1, of twenty-day catgut are liable to cause this difficulty if they come in contact, even incidentally, with the fatty layers. As a consequence, I have completely abandoned the use of twenty-day catgut of any kind and all sizes; and as a further consequence, I get no more yellow sap from my wounds. Nor do I have to remove knotted splinters from the field of operation some weeks after my patients are otherwise well."

In all things we have learned that radical measures are necessary, yet frequently we have profited not so much from the radical measures themselves as from the things we have learned from them. The pendulum swings from one extreme to another and finally settles itself at a midpoint where it can be allowed to remain with a feeling that all is well.

Thus we see the pendulum swinging back from Listerism and chemical disinfection to simple asepsis. Even the instrument makers have reverted to original types of stationary locks.

Curative measures, whether medical or surgical, depend on tissue resistance only. We have overdone the matter of drugging our patients, to the benefit of the many cults and pathies that surround us. Our surgery however has reached the point where it is almost perfect, so far as detail of technic and details of preparation are concerned.



EYE SYMPTOMS IN GENERAL DISEASE

This is the second article of a series in which will be discussed the diagnostic and prognostic importance of a careful study of the eye, from the standpoint of the general practitioner

By THOMAS HALL SHASTID, A. M., M. D., LL. B., Marion, Illinois

II.—EYE-SYMPTOMS OF INFLUENZA

THE ocular symptoms of gripe possess but little importance as a means to the diagnosis of the general affection in question, but nevertheless they are richly enough endowed with significance on their own particular account.

The chief eye-symptoms of influenza are:

1. Conjunctivitis.
2. Episcleritis.
3. Keratitis and ulcus corneæ.
4. Iritis.
5. Pareses and paralyses of the extrinsic muscles.
6. Ophthalmodynia.
7. Paresis and paralysis of the accommodation.
8. Affections of the retina and optic nerve.
9. Orbital abscess.

Conjunctivitis.—The commonest ocular symptom of gripe is undoubtedly conjunctivitis. In some epidemics but little conjunctivitis occurs, while in others it stands out plainly as one of the most conspicuous symptoms. There is in all the grippal cases of conjunctivitis, when extreme, a special tendency to the rupturing of the conjunctival vessels and the effusion of blood between the conjunctiva and the sclera (hyphema). The resulting appearance is that of an absolutely solid red patch showing through the transparent conjunctiva. The patient literally has "blood in his eye."

Episcleritis.—Whether the conjunctival trouble be severe or slight, the patient may have episcleritis, i. e., inflammation of the superficial layers of the sclera. The trouble is always local, appearing as a small prominence on the sclera, over which the conjunctiva with its vessels can be freely moved. Beneath the conjunctiva the patch is cov-

ered by immovable vessels of a violet color, and, when the patch disappears, it is prone to leave in the sclera a thinned-out spot of a slaty blue color. The nodule is liable to be followed, after a longer or shorter interval, by another, and then by another, and sometimes still another and another, till the circumcorneal region is finally altogether taken up with the thinned-out slaty blue places in the sclera.

Deep scleritis (the kind followed by great attenuation and subsequent ectasias, or bulgings, of the sclera at the affected places) has never been observed as a result of influenza so far as I am aware.

Keratitis and Ulcus Corneæ.—Corneal inflammation is in gripe a not uncommon complication. It often takes the form of *keratitis dendritica*, or *herpes febrilis corneæ*. This simply means that a "fever-sore" sometimes forms upon the cornea, such, in fact, as occasionally appears in consequence of any sort or kind of febrile affection. A "fever-sore" on the cornea, however, is a vastly different sort of affair from a similar affection on the lip or at the margin of a nostril. It is, indeed, a not infrequent cause of blindness, partial or complete. The inflammation is often confined to the superficial layers of the cornea, but it may leave a rough, irregular cicatrix and serious disturbance of vision.

These "fever-sores of the cornea" should always be looked out for, especially in delirious cases, for in such cases the patient, of course, will never direct his physician's attention to the eyes, and, after recovery from the general affection, he may discover that he is wholly or partly blind. Because many of these ulcers are difficult to discern, a solution of escorcin, one dram to the ounce, should be instilled into the previously

cocainized eye. If ulcers are present, they stain a bright-red.*

Deep ulcers, as well as "fever-sores," occur upon the cornea in consequence of grippe, and I have seen a case in which the entire cornea had sloughed away, and in which the lens (as well as both the humors) had escaped from the eye, and the eyeball had collapsed to the size of a bean.

Iritis.—Inflammation of the iris (not the result of a coexistent keratitis), though said to occur, is, in my experience, one of the rarest complications of grippe. I have never seen a case in which I was really certain that influenza was the actual causative agent. Perhaps in syphilitic influenza may excite an outbreak of an iritis already smoldering.

Paresis and Paralysis of the Extrinsic Muscles.—These affections are seen at times as consequences of influenza. My experience with such complications has been that, contrary to the rule in paresis and paralysis of the ciliary muscles resulting from the same general disorder, the trouble responds to treatment very satisfactorily.

Myalgia of the Extrinsic Muscles.—Ophthalmodynias are extremely common in grippe; in fact, in a great many cases the pain felt as a result of movements of the eyeballs is one of the earliest symptoms of the general disorder. Bandaging the eyes to keep them still, I wish to remark in passing (merely because the matter is so seldom thought of), will often give the greatest relief in these cases.

Paresis and Paralysis of the Accommodation.—Paralysis of the ciliary muscle is a not infrequent result of influenza, and one likely to be permanent, in part at least. The consequence is that many who were not presbyopic before their grippal attack (the present writer for instance) discover the necessity for wearing old-sight glasses at a time when all their other troubles due to influenza are passed and forgotten. Those who were presbyopic before their in-

fluenza find themselves obliged to "change glasses."

Affections of the Retina and Optic Nerve.—

The optic nerve and retina are now and then involved in grippe, but very seldom seriously. Amaurosis, coming on suddenly



DR. THOMAS H. SHASTID

and passing away in two or three days or a week, is not extremely uncommon, and resembles, in its fugitive nature, the amaurosis due to active nephritis. The affection is probably caused by spasm of the retinal vessels.

Phosphenes and photopsia (subjective sensations of light, often of a curious character) are commoner than amaurosis; papillitis rarer, though it does occur. Optic atrophy as a result of grippe is unknown, except in consequence of cicatricial contractions resulting from an orbital abscess.

Orbital Abscess.—Orbital abscess, as a consequence of grippe, is probably always due to infection of the orbital cellular tissue by pus migrating, or at least inrushing, from some of the various sinuses of

*Escarin is much to be preferred to the more commonly used fluorescein. The latter substance yields to an ulcer only a faintly greenish hue, not strongly contrasting with the color of the pupil and iris. (Synonym: escarinol.)

the nose, generally the frontal and the anterior ethmoidal. Metastatic abscesses are said to have occurred, but in every case in which meningeal complications took place and an autopsy was held, the accessory

sinuses just mentioned were found to be filled with pus and their walls to be carious. A sharp watch for sinus complications would probably have prevented a fatal result in at least many of these cases.

INFLUENZA: ITS PEGULIARITIES AND ITS SUCCESSFUL TREATMENT

Of few diseases is there more mental "haziness" than there is about influenza.

The writer gives a practical "talk" about its diagnosis and a very helpful resume of its treatment

By GEORGE H. CANDLER, M. D., Chicago, Illinois

THERE are, unfortunately, almost as many methods of treating influenza as there are different conceptions of the meaning of the term. One doctor calls a simple "cold" or coryza "influenza" and confidently asserts his ability to cure the disorder in three days. The next physician regards influenza as a much more serious malady with marked involvement of the conjunctivæ, nasal mucosa and upper respiratory tract. He calls attention to the peculiar and *pronounced* weakness which invariably exists in influenzal patients, but cheerfully states that "by proper methods of treatment"—the liberal use of quinine and aperients, with several days' rest in bed and plenty of fluid nourishment—"all my cases recover within ten days."

Burggraave and the older European practitioners describe influenza as "a cold or catarrh affecting the *primæ viæ*, accompanied by constrictive phenomena and more or less violent fever." It is a "species of diphtheria" "due to the presence of proto-organisms in the atmosphere." The man, herefore, with a severe "cold in the head," could not, according to this definition, possibly have "influenza," whereas the same individual presenting with gastroenteric disorder, high fever, muscular pains, etc., etc., would be deemed by the practitioner first mentioned to be suffering from some serious malady—not in any way akin to such a

simple disease as "influenza," *alias* acute nasal catarrh!

What Influenza Really Is Not

The term influenza should be regarded as generally descriptive of a more or less severe disorder caused by the invasion of the mucosa of some portion of the body by the bacillus of Pfeiffer. Epidemic catarrhal fever, la grippe, are synonymes merely, not terms describing various forms or degrees of influenza. The "influenza" of our forefathers was what in more modern times is called grippe—that is, when the term was not misapplied (as it often was even then) to designate a simple coryza.

"What do you mean by 'catching a cold?'" asked a well-read and experienced physician of the writer recently; and "Can a patient with a temperature of, say, 102° F. 'catch cold?'" Space forbids the reproduction of the answer, but a clear understanding of what a "cold" *is* will enable the physician to differentiate clearly between that disorder and an influenza.

True, a simple congestion of the conjunctival, nasal or other mucosa may have to exist before the bacillus *influenzæ* can gain access to the system; it is generally conceded that the soil must be suitable before germ propagation can proceed successfully. It is also undoubtedly true that the robust individual, taking in enough reparative

material and excreting a normal quantity of waste is less likely to succumb to the invasion of *any* microorganism than the weak, anemic, waste-laden creature whose body-fluids offer a culture-medium superior to the best gelatin bouillon of the laboratory.

Moreover, we now understand that it is not the bacilli themselves which prove so inimical to the welfare of the body, but the toxins they produce. A few bacteria may enter a body possessed of normal resistant capacity and their prompt destruction by the phagocytes will naturally be accompanied by more or less fever and systemic disturbance.

The Real Beginning of Grippe

But, on the other hand, let a large number of microorganisms invade the debilitated or already toxin-laden man and the clinical picture will be entirely different. Especially shall we note peculiarities when the patient has a preexistent "weak spot." In such a case we shall have not only a local area of congestion (point of entry?) with every evidence of rapidly decreasing resistance and as rapidly increasing toxemia but a serious involvement of the earlier affected organ or organs. Hence the rapidly fatal ending in so many cases of the grippe. Hence, also, the confusing list of "varieties" of the disease given by many modern writers.

It is an unfortunate fact that the dangerous character of influenza is not fully recognized. It is also unfortunate that the bacillus is not easily recognized in the secretions after the first few days—and, unless the attack has been severe, the patient is not likely to present himself for treatment till several days have elapsed. Then, of course, some one symptom is likely to obtrude itself upon the attention of physician and patient alike, with resultant faulty treatment and erroneous diagnosis.

I have dwelt upon these points at some length because I do not intend to present the usual classification of types—gastrointestinal, catarrhal, nervous, etc. Neither can I give space to an extensive consideration of the etiology and pathology of influenza. Both should be well known.

Many years' bedside experience and an immense correspondence have served to convince me of the primal necessity for *treatment of the pathological conditions present in the individual*, and as these conditions are themselves fairly constant in character it is not absolutely essential that we secure a mental definitive etiological picture before beginning effective medication.

General Picture of the Disease

Influenza is an acute, infectious disease; endemic nearly always, and, at irregular periods, epidemic. Rarely a year passes but that the disease presents itself in epidemic form in the larger cities. In severity it varies markedly, the virulence of the microorganism increasing up to a certain point, especially under favorable climatic conditions, then decreasing, until the patients last affected hardly feel more than "indisposed." The possibility of secondary infection must never be forgotten—many a fatal case of so-called "influenza" was really a pneumonia or acute nephritis. The influenza patient is peculiarly prone (and naturally enough, when one considers the catarrhal character of the disease) to pulmonary, renal and gastrointestinal inflammation, and at the first sign of such complication remedial measures of an effective character must be instituted, quite regardless of routine or precedent.

The bacillus of Pfeiffer can easily be demonstrated in the nasal and bronchial secretions of those invaded, but after a few days it is not (or has not recently been) so simple a matter to find them. Invasion is more frequent during the late fall, early winter and damp spring months, while crowding, with unhygienic methods of living, favor the spread of this disease. The weather at present prevailing in Illinois, for instance, is peculiarly favorable to the spread of influenza, and a large number of mild cases have been reported.

Prophylactic and General Measures

Save during an epidemic, when well-fed, well-housed and complacent "individuals in authority" get scared for their own safe-

ty, it is practically impossible to institute practical prophylactic measures. Influenza travels with humanity, and the street-cars, trains, theaters, stores and factories are hotbeds of contagion. Occasionally when railroads, street-car systems and huge industries are "tied up," owing to the illness of a majority of the employees, a general cleaning up is ordered and a more sanitary condition of vehicles and buildings secured. But let ten thousand of the citizens sneeze and snuffle from "simple colds," and nothing is done; *absolutely nothing* as a rule—not even simple disinfection of the individual discharges and (temporary) isolation of the patient.

Here is where the physician is to blame. He should not term an influenzal infection a "cold" and let his patient run loose to spread the disorder unless he is *sure* the bacillus influenzae is not present. On the other hand, doctors should not call every coryza or bronchitis the gripe and boast of their ability to "cure" their patients in a few days. To such men, soon or late, must come a fall—and a severe one!

All influenza patients should be confined to a moderately warm room (and if the symptoms are at all severe, to their bed) and the nares, buccal and faucial mucosa should be sprayed frequently with a warm, mildly alkaline antiseptic. The skin, in addition, should be sponged freely twice daily with a solution of magnesium sulphate, one ounce to the quart, to which ten drops of carbolic acid or creolin may be added with advantage. To those unfamiliar with the action of these epsom-salt sponge-baths this may seem unnecessary, but a trial will prove the value of the procedure. Moreover, the epsom-salt sponge frequently repeated unquestionably increases the alkalinity of the blood and puts a stop to the racking pains so often present in influenza. Neuralgias are relieved in a similar manner.

It is essential, then, in all cases of influenza to keep the patient in a room removed from other members of the family and to minimize the infective character of his secretions by the free use of alkaline antiseptics. Handkerchiefs should be placed

in a carbolic-acid solution or similar antiseptic; or, better still, suggest the use of old linen, which may be burned as it becomes soiled. The use of formalin is strongly recommended: a small portable apparatus is obtainable, and each room may be fumigated while the family are elsewhere. Indeed, I order now, as a routine measure, the inhalation of formalin and menthol, using Dr. Leininger's most excellent little pocket inhaler which contains solidified formaldehyde and menthol crystals. Its use *almost* insures immunity. If at the same time those exposed saturate themselves with calcium sulphide and take a brisk aperient (calomel and podophyllin, followed by a saline laxative), infection is not likely to occur.

Symptoms, General and Special

The symptoms necessarily vary in the individual, but a fairly constant clinical picture is presented early. The patient has a coryza, engorged conjunctivæ, is hoarse, complains of more or less dryness or soreness in the throat, pains in the limbs and back, great weakness and a severe headache. A preliminary chill may have been noted. Indeed, the absence of a chilly sensation up the back is rare. Nausea and vomiting denote involvement of the stomach and, more rarely, symptoms resembling those observed in meningitis present, thus indicating that the force of the toxemia is being felt chiefly by the nervous system.

Various dermal disorders may appear during the course of the disease—*this, however, never happens when the skin is kept clean and active* and full renal and intestinal elimination is secured. The tongue may be heavily coated with a yellow or white coat (autotoxemia) or "slick" and red; late, in severe cases, it may assume even the typhoid appearance. The temperature may run up to 102° to 104° F. in the first twenty-four hours; it rapidly declines however if free perspiration is secured. More or less involvement of the respiratory organs may be evident. In the *purely* "catarrhal" cases sneezing, lachrymation, a profuse running at the nose and marked

hoarseness make a typical picture. The temperature in such cases seldom runs high.

Occasionally we will observe a remittent or intermittent type of fever, and in old people with little resistance this condition may be persistent. Here we will invariably find a rapid and feeble pulse. I have seen several cases in which the only notable symptoms were the continued high temperature and diarrhea. Weakness increased steadily, however, and resulted finally in confinement to bed and compelled regular treatment.

Symptoms In Severe Attacks

In the most-severe cases—usually observed during epidemics—the patient may experience, three or four days after exposure (the usual period of incubation) marked malaise with head- and back-ache, these symptoms being followed in a few hours by a rigor, immediately after which the temperature mounts rapidly to 103° to 104° F.; delirium or convulsions not infrequently accompany this condition. These are always serious cases and require prompt and positive treatment. Other cases, which cause the best physician to worry, are those with preexistent cardiac or renal lesions and *pronounced* infection, in the old and feeble.

Latent diseases have a habit of "lighting up" during an attack of influenza—a fact which must never be lost sight of. Men suffer more frequently and more severely than women. Young children are not particularly prone to contract the disease, and if they do, usually present a light form. Strumous children, the anemic and rachitic, often show marked debility and malassimilation for weeks after an attack; phthisis florida often begins with (or may follow) an influenza. Watchfulness is essential.

In closing this department, I desire to impress upon the physician the necessity for recognizing a superimposed typhoidal infection. I have seen cases, where the Widal reaction was positive and typical pea-soup stools were being voided, treated as purely influenzal! The gripe patient is especially prone to contract typhoid: in-

deed the bacillus typhosus may have been long present in a quiescent condition, becoming active only when the deranged system offered suitable conditions.

The Treatment of Influenza

Treatment, after all, is the most important feature, for even if we are not able to make a positive *classical* diagnosis at once, we shall promptly recognize *injection* (with the inevitable retention of toxic material, fever, etc.), the basal remedial measures which apply in one case serving in the other. Observation will enable us to select our adjuvant remedies as we go along, but the immediate *dominant* medication is very clearly indicated.

Put the patient to bed in a room the temperature of which should not be lower than 70° F., and if possible have the air kept moist with medicated steam (eucalyptol, sanitas oil, oil of pinus pumilio or the proprietary cresoline, any of which may be utilized). Any small metal container half full of boiling water may be kept steaming on a small kerosene or alcohol stove and from time to time a few minims of the volatile oil selected may be dropped on the water. Cresoline is vaporized in a special apparatus, but as no steam is generated it is not so useful in this connection. Have the patient's mouth, nares and fauces thoroughly cleansed with an alkaline antiseptic: liquor antisepticus, U. S. P., or menthol compound, of the latter one tablet to eight ounces of water, to which a little glycerin may be added.

The eyes of the patient should be irrigated with a boric-acid solution. I order the goose-neck douche for nasal toilet, aluminum eye-cup for the eyes, and a spray for the fauces and mouth. If there is any pharyngitis, the throat is then sprayed with campho-menthol or similar oily emollient. A warm solution of magnesium sulphate (carbulated) is prepared and the entire body sponged thoroughly, part by part. If the bowel has not been thoroughly emptied, three pints of salt solution are thrown into the colon, and if part of it is retained, so much the better; the water then is absorbed

and flushes the kidneys. This general toilet is repeated night and morning; the buccal and nasal cleansing every three hours. The mouth is rinsed well also before and after eating or drinking.

General Internal Medication

Calomel gr. 1-3, iridin gr. 1-6, podophyllin gr. 1-6, are given as *soon as possible* and the dose repeated half-hourly till six such doses have been taken. Two hours after the last dose the patient receives a full saline laxative draught. Every hour thereafter, for twenty-four hours, calcium sulphide and quinine arsenate; and also, for four to eight hours, or until the temperature falls to 100° F. or slightly lower, aconitine, digitalin, veratrine, are added to the foregoing drugs. If the eyes are very bright, the face red, pulse hard and quick, skin dry and nervous phenomena are pronounced, substitute gelseminine for the aconitine, and pilocarpine, each in proper dosage, for the veratrine. This combination (gelseminine, digitalin and pilocarpine) will, under such conditions, produce more positive and desirable effects, and in a shorter time, than any other medication with which I am familiar.

After the bowels have acted freely the temperature generally falls, and under the treatment outlined seldom rises again above 101° F. Under such circumstances the aconitine and digitalin may be given every two or even every three hours, macrotin, being added if there is much muscular soreness. The quinine arsenate and calcium sulphide *must* be continued for a full twenty-four hours. In very robust patients, presenting a full, bounding pulse, "bursting headache," and high temperature, it is often well to give at once (and in person) phenacetin (or acetanilid) grs. 5, quinine gr. 1, ordering one more such dose (with a little hot water) in two hours. The aconitine (or gelseminine) combination already mentioned is given just the same.

Rarely bronchial conditions call even early in the disorder for some form of iodine and codeine. Calx iodata and codeine every two hours, for a few doses, then

less often, will promptly relieve pharyngeal irritation, specially if the spraying suggested is used. Here and there a dose of hyoscyamine will be indicated in place of codeine.

In twenty-four hours we shall usually find the patient much improved; the bowels will have acted; the skin will be moist; urine will have been voided freely; the calcium sulphide and quinine arsenate will have rendered the body-fluids inimical to bacteria. Already much toxic material will have been disposed of and the body will have ceased to produce a further and undue supply, hence instead of a progressive we have a lessening disorder.

Treatment in Stage of Improvement

Now an intelligent conception of the conditions obtaining enables us to prescribe still more effectively. We insure hepatic activity and a further evacuation of the small bowel by ordering once more calomel gr. 1-6, podophyllin gr. 1-6, half-hourly for four doses, from 7 p. m., and a saline laxative the next morning on awakening. To increase phagocytic activity we give ten drops of nuclein hypodermically (if this is at all possible; if not, the same amount is dropped under the tongue), the dose to be repeated every four hours.

Calcium sulphide, quinine hydroferrocyanide and echinacea are often given together every two or three hours according to conditions, aconitine or gelseminine being added if desirable to reduce temperature. If there is much coryza, hyoscyamine (or atropine) may replace the last-named drugs or, if fever persists, the echinacea. Only a few doses will be needed. General muscular pain will demand macrotin and perhaps bryonin every four hours; extreme nervousness is controlled by the use of avenin, scutellarin, and tincture of passiflora.

If the intestinal conditions are not satisfactory and autotoxemia is evident, the sulphocarbolates must be pushed "to effect" at once. Five grains of the sulphocarbolate of sodium, or the combined salts of calcium, zinc and sodium, should be exhibited every three hours until the stools be-

come black, at first, then normal and odorless. In cases where diarrhea is marked substitute the zinc for the sodium sulphocarbolate. If the calomel, podophyllin and saline laxative do not suffice to empty thoroughly the intestines (which sometimes happens), give night and morning one ounce of castor oil on hot milk. I have had more than one case in which the temperature refused to drop until the oil removed the fecal concretions from some coil or pocket of the intestine.

See to it that enemata are given each night, also that the skin is sponged twice daily. For the first three days allow only liquid food, such as thin gruel, albumen and barley water (the latter *ad libitum*), bouillon, broth, etc. By the fourth day you will usually find your patient demanding release from the bed and a "square meal." Modified to suit individual conditions, this is the treatment for influenza.

General Observations

A careful study of the action of different drugs here presented will prove their selection theoretically correct, while clinical experience will demonstrate that they produce practical results.

Secure elimination; equalize circulation; increase leucocytosis; render the body an unsuitable culture-medium for the bacteria invading it; sustain nutrition (but feed the patient no more than he can assimilate); and control finite symptoms with definite remedies! There we have not alone the treatment of la grippe but of every other infection or acute disease.

Renal torpor, when it exists, will require asparagin or possibly barosmin every two hours, preferably administered with a glass of barley water. A dram of fluid extract of hydrangea may be added.

To children I give 30 to 40 drops of spirit of nitrous ether at bedtime once, and thereafter the above remedies as long as necessary.

Cardiac waverings may require the use of cactus three times daily. Cases which have run along under poor treatment always call for cactin and strychnine or, preferably, the arsenates of iron, quinine and strychnine, in connection with nuclein. This combination, by the way, is the best tonic to order in *all* influenza cases.

Light diet must be given for some days, and it is well to assist digestion and improve tone of the gastric mucosa by ordering hydrastin before meals and papayotin, in suitable dosage, after food. Some hepatic stimulant should be given at night, three times a week for a month, while a saline laxative the morning following helps materially.

In *rebellious* cases (improperly treated at first) very careful study of the individual will be called for. The exact derangements existing must be discovered and the correct remedies therefor selected. *That is positive therapeutics.*

In conclusion, it might be well to add that the more violent the attack, the more virulent the infection, the more need for prompt and positive elimination. Copious enemata, pilocarpine hypodermically, and elaterin, followed by saline laxatives internally, will speedily control the condition. It is well as a rule to put the patient into a wet-pack and keep him there till the bowels act and profuse diaphoresis is secured. Then push the treatment as outlined. Quinine in massive doses is injurious. Vomiting yields to cerium oxalate gr. 2, or, at other times, to resorcin in small doses, or delphinine, repeating the dose hourly to effect.



A FEW PNEUMONIA SUGGESTIONS

Pneumonia is the great scourge of the winter months. Every physician should know all that is possible to know concerning the treatment of this disease. This article contains some life-saving suggestions

By JOHN HUND, M. D., Milwaukee, Wisconsin

OF all the diseases the weary family physician is called upon to treat there is none perhaps that develops in so desperate, incalculable and treacherous forms, causing so much worry, anxiety and final disappointment, as this one disease, pneumonitis.

In no other position of our professional life do we feel more keenly our responsibility on the one hand, our own humbleness and incapacity to cope with the mysterious forces of nature on the other hand, as when we sit at the bedside of a fatal case of lung-fever.

It is then that we may apply the words of Schiller to our wailful plight:

Man now loses hope at length—yielding to immortal strength,
Idly, and with wond'ring gaze—all the wreck he now surveys.

Yes, when the end has come—the battle has been fought and lost—we may survey the wreck, *try to survey it*, in the starlight of modern science. But, alas! those stars that have glittered and twinkled so brightly while the sky was clear have vanished when the clouds hung low, and our great leaders and high commanders, who with loud huzzahs from safe positions encouraged us on with their proudly waving flags bearing the bold inscription, "*In hoc signo vinces!*" have furled their banners, and forsaken us, to struggle on alone in the endeavor to "save our own honor"—to secure future success.

There Is No Specific Remedy

It cannot be gainsaid that all agents that have been introduced and recommended by various authors as positive remedies in pneumonitis have been more or less disappointing. Take aconite, veratrum viride,

digitalis, and the long list of old and new medicaments; study carefully their physiological actions and you will find none which is entirely free from the suspicion of false pretense, basing its claim wholly or partly upon the sophistical principle of "*post hoc, ergo propter hoc.*" For there is none the absolute power of which you may exactly measure and the precise share of which you may estimate in connection with the crisis or final result of a case of pneumonia.

Every time I hear of a new "infallible" remedy for this disease I am reminded of an old anecdote of Frederick the Great, which runs thus:

One of his officers once made a suggestion to the great soldier-king to provide his cavalry with new and improved fire-arms, to which Frederick in his customary drastic and always pointed style answered as follows: "All nonsense. My Prussians would not know how to use them. Let them stick to their sabers, and if they are bound to shoot, let them use their old carbines."

In this anecdote lies a deep moral for us all—that we should depend upon ourselves and the things familiar to us first instead of upon things outside of and foreign to us.

The first thing in combat is to comprehend the situation and position of the enemy well, then to reconnoiter our own, next to formulate your plan, and finally to make a determined and persistent attack.

As the word pneumonitis implies, we have here to deal with an inflammation, or if you please, conflagration of lung-tissue. The extent of this pathological condition does not need to be specifically considered from our clinical view-point, for the area involved may modify our treatment somewhat, although never radically changing our tactics.

What, then, in a general way is the treatment for this condition as we define it here? Exactly the same as in any other inflammatory condition, or to speak symbolically, in a conflagration. Our first step is to put out the fire if we can, next to limit its field and to protect surrounding textures, and finally to clear away the debris and repair the damage.

This is what you have to do, and how you do it must to a great extent be left to your own judgment, ability, and extent of your ingenuity.

If permitted I will briefly present a rough outline of my own treatment of pneumonitis.

My Way of Treating Pneumonia

When I enter a sick-room, finding a case of pneumonitis, I pay my first attention to the temperature, first of the room and then of the patient. I ask as few questions as possible. I would rather depend upon the features, the general appearance, the pulse, the respiration, and above all, the temperature of my patient, measuring or estimating the latter not alone with the thermometer but with my bare hand, which I put to his head, his body, feet and hands.

If I find the head and body hot and the extremities cold or at a lower temperature at least, I correct this condition at once by applying first heat and then cold, the latter in the form of cold-packs, from the feet to the knee. For this purpose I generally use a large pair of thick stockings wrung out of cold water, well covered with dry, warm clothing. Next I examine the tongue and eyes for gastric and cerebral symptoms, and if indicated, I give a saline laxative at once or sometimes preceded by a few grains of calomel. If the patient is plethoric I bleed, either by venesection or with leeches. Poultices and all hot applications direct to the chest I condemn, because I cannot see any good in their application, but only harm by increasing the discomfort and the anxiety of the patient through enhancing his predisposition to catching cold. A mild expectorant, such as compound syrup of white pine or of wild cherry and the like,

is always in order. When I have attended to these various things I try to procure a good rest for my patient, awaiting results and further indications. After a good rest the patient will generally find himself, as a result of the cold-pack, bathed in perspiration.

And now the most critical moment has arrived, when the temperature of the room must be carefully regulated and the patient eagerly protected against external and internal irritation against the loss of vital force. The caloric condition must be taken well in hand, diaphoresis limited to judicial action of elimination, which a skilful hand may regulate with sponge-baths. When such a skilled person (nurse or relative) is not in attendance, it is perhaps better to trust our medicaments, although we may confess that such conduct is on the empirical line, described by the old maxim, "*Ne ratione, sed experientia et experimentis morbi sanantur.*"

When the stage of exudation is safely reached, I know of no better remedy, if medicinal agents are to be used, than the old-fashioned solution of ammonium acetate, and we may also give the carbonate or chloride of ammonium. Digitalis I never prescribe to be dispensed and administered by others, but always administer it myself as the heart's action, indicated by the pulse, may warrant or demand. But I hold that the most extreme care should be observed in the employment of this drug, which is properly compared to the whip used on a tired horse. The same caution must be observed with emetics.

In concluding I wish to say that no positive and fixed plan for the treatment of pneumonitis can be laid down, since the course must be that of skilful strategem, and he who is on the alert for every symptom and ready to meet all changes and movements of the hostile elements will get the best results.

My last suggestions, then, would be, to depend upon our old stand-bys: hydrotherapy, bloodletting, stimulation, and whatever medicine you may administer yourself as the ever-changing case may call for.

[Dr. Hund does real work with real remedies, and his work is done in the sick-room. He gets good results, because he studies his patients and adapts his remedies to the pathologic conditions he detects. He gets good results and he knows he gets them. When he has learned to use modern weapons, the finely tempered steel imple-

ments of modern times instead of the paleolithic masses of rudely shaped rock, he will not have to unlearn aught or modify his correct methods much. He will simply work as he now does but with more certainty of aim, more sureness of result, and correspondingly more boldness in his therapeutic attack.—ED.]

DIGITALIS AND ITS ACTIVE PRINCIPLES

While this is generally admitted to be our most valuable cardiac tonic, it is not commonly appreciated how much the galenic preparations vary in strength. The desirability of using an active principle

By WILLIAM F. WAUGH, M. D., Chicago, Illinois

DESPITE the numerous competitors that have been proposed, digitalis still stands at the head of our cardiac tonics. Few remedies are used more generally by the profession. Nevertheless we find that in this country and in Germany there is far from being a consensus of opinion as to the best preparation of the foxglove that should be used. This uncertainty unfortunately is due, in many instances, to the fact that physicians have not formed the habit of administering the drug for effect, and watching for this effect.

Janeway illustrated this important fact in a discussion at a meeting of the New York Academy of Medicine, as printed in *The Medical Record* for November, 1907. Dr. Janeway said that on going on duty at St. Luke's, he found that there had been no improvement in those heart-cases that had long been on digitalis, strophanthus, etc. Obtaining some good English leaves, within forty-eight hours after commencing with them, the effect was manifest. Here was one of the greatest hospitals in the United States, with the most illustrious clinicians in New York City, and they had not paid sufficient attention to their cases to see that their doses were insufficient to get the specific effect of the drug employed.

In *The Boston Medical and Surgical Journal* for April 16, 1908, the special Paris

correspondent devotes his letter entirely to this remedy. He says that in France the question as to the best preparation of digitalis was settled forty years ago, and since that time the use of digitalin has been universal. The same is true in Italy. The great French clinicians are practically unanimous on this point. He quotes an American textbook as saying: "Digitalis contains a number of substances, no single one of which acts as the preparations of the crude drug. In other words, all these compounds must act together to be therapeutically active." The writer of the textbook then mentions the various glucosides, and says: "None of these substances can be used in medicine to take the place of digitalis. The dose of digitalin, which ought not to be used as a substitute for digitalis, is ..." etc., etc.

The correspondent goes on to speak of the reasons for the variability and uncertainty of the crude preparations of digitalis.

Commercial Interests May Cloud Judgment

Since digitalis has received the preference for forty years in France, there has been but little in French literature telling of the reasons for changing to this glucoside from the crude preparations of digitalis. In his great work on therapeutics, Laura gives in detail a mass of the testimony against digi-

talís and in favor of digitalín. Since the question is still undecided in this country, it may be of interest to examine this testimony, which I herein wish to submit.

The Testimony Examined

Laura says: "The preference for pure digitalín over the dangerous digitalís is a fact so logically and so clearly founded upon the demonstrations of science, that it imposes itself upon every physician as an imperative duty."

Digitalís has been studied by many of the greatest men in the ranks of medicine, among whom we may name Homolle, Quevenne, Leger, Germain, Bouchardat, Burggraefe, Fischer, Traube, Wunderlich, Schróff, Stannius, Wilmar, Barton, Selmi, Semmola, Tomasi, Cantani and Ruatta.

Huchard devoted a monograph to this subject. Potain especially among the French was instrumental in firmly establishing digitalín in the affections of his countrymen. Among those who use digitalís we find a difference of opinions, beliefs, conclusions and doctrines, with which the clear and certain unanimity of those who use digitalín stands in marked contrast.

Digitalís varies widely according to the soil in which it grows, and the climate in which it is gathered. The cultivated plant in France and America possesses no therapeutic efficacy. The strength of the plant varies with the time it is collected, but authorities are not in harmony on this point. Schneider advises that it be collected in the month of August or September. Hoepe directs that only the leaves of the second year's plant should be collected, a little before the season of flowering. Others urge that the leaves be collected during flowering. But this term "flowering" is indefinite, since the proportion of active principles varies widely between the beginning of flowering and its end. The same uncertainty is found among authors as to the part of the plant which should be employed for different pharmaceutical preparations, the extract or the tincture, for example. Some recommend the leaves, others the flowers and the seeds. Buechner says

that the seeds contain a digitalín purer than that of the leaves. The latter often are fraudulently mingled with the leaves of other plants. Among common adulterants Laura mentions mullein, borage, two varieties of comfrey, and the conizza squarrosa. It is not easy to discover these, especially in the dry plant.

The strength of the leaves varies also with their mode of preservation, since a slight alteration of their tissue may induce a serious alteration of their efficacy. In the dried leaves Hoepe found the proportion of amorphous digitalín much larger than of the crystallized.

Deleterious Effects of the Crude Drug

Even in small doses digitalís exercises an evil influence over the digestive apparatus, causing nausea and vomiting, fatiguing and obstinate and inducing a disgust on the part of the patient toward the medicament. In larger doses, continued during some days, we have, in addition, the serious dangers of accumulation, the doses of digitalís being retained in the organism until the entire effect of all is manifested at one time. In cardiac cases the continued use of digitalís arouses the dyspepsia, to which these patients are necessarily subject but which the use of digitalís renders incurable; or it increases the manifestations, or causes them to appear for the first time if they have not already arisen. The consequent interference with alimentation neutralizes any benefit that may arise from the use of digitalís. Besides, there is the danger of collapse, either general or of the myocardium alone, which may be produced by moderate doses of digitalís.

When one realizes how readily in certain grave forms of arrhythmia and asystolia the patient slips into syncope and collapse under the slightest depressing influence, it is not difficult to realize the dangers that may lie in digitalís.

Principal Symptoms of Digitalís Poisoning

The principal symptoms of poisoning by digitalís are the gastrointestinal manifestations already mentioned, general debility,

weakening of the cardiac movements, alteration of circulatory rhythm, irregularity and intermittence of the pulse, and the weakness which results therefrom. The pulse is weakened and intermits, there is cerebral torpor, drowsiness, syncope, pain in the head, and finally delirium. These phenomena are the more grave and persistent as the patients are feeble, the doses higher, the treatment longer continued, and the individual idiosyncrasy more marked. The drama finally ends in death.

This explains the numerous warnings in the use of this remedy given to their pupils by the great masters, and the result is that such a fear of the remedy is begotten that the physician, in treating diseases of the heart, confines himself to doses so small that they are insufficient to fulfill the needs. He deprives himself, therefore, of the use of the remedy, but even so is less culpable than the too rash physician who uses it without judgment and without consciousness of the perils to which large doses subject the patient.

Many Authorities Are Cited

On the other hand, Homolle, Leger and Cantani showed that chemically pure digitalin exercised no deleterious influence over the gastrointestinal apparatus, since the irritation of digitalis is attributable to digitalic acid.

As early as 1850 Boullard announced to the Academy of Paris that digitalin, properly prepared, represented all the therapeutic properties of digitalis. Compared with the leaves, digitalin should be preferred, as it offers greater ease of ingestion, more certain action and a more decided tolerance.

Cantani, in 1869, said that "digitalin is the active principle of digitalis, and represents alone all the action of that important substance."

Righini wrote, quoting Bouchardat: "Digitalin represents the medicinal properties of digitalis, as quinine represents exactly that of cinchona." This was in 1866. The same author added: "Digitalin is reported to be the best preparation of digitalis, on account of its facility of ingestion, its cer-

tain efficacy and its ready tolerance. For these reasons it should be preferred to the powder, the infusion or the extract of digitalis."

Schroff wrote: "Digitalin is the only substance of digitalis which, administered therapeutically, induces the action of this plant upon the central apparatus of circulation as well as its therapeutic action. The fatty substance which provokes nausea is digitalinic acid."

Wiggers and Husemann placed digitalein by the side of digitalin, adding that the action of the two was in all respects identical.

Stadion, quoted by Ruspini, in 1871, said that digitalin acted like digitalis upon the circulatory, nervous and muscular systems, but less than digitalis upon the organs of digestion.

In 1852 Andral and Lemaistre said that digitalin should be administered in chronic diseases of the heart, when the pulse is rapid and the circulation irregular, this substance having the property of restoring the pulse to the normal type; also in cases of dropsy, induced by disease of the heart or by alteration of the blood, as in albuminuria, digitalin increases diuresis and dissipates inflammation.

Bouchardat said that the administration of digitalis should be watched with care, because a dose too large or too long continued was likely to produce phenomena of intolerance.

A partisan of digitalis, Hirtz, wrote, among his conclusions, that digitalis of good quality, in therapeutic dose, at the end of twenty-four or thirty-six hours induced malaise, nausea and often vomiting. He insisted upon the necessity of the physician knowing the quality of the drug, saying that "digitalis is a heroic medicine when well prepared, and worthless and insufficient if not well prepared."

Homolle, Quevenne and Oulmont found one-half of the digitalis of the shops worthless.

Speaking of the use of digitalis in England, Hirtz said: "In presence of the formidable quantity of tincture and infusion administered by the English without the

slightest physiologic effect, we cannot avoid the conclusion that if such dosage does not poison the patient, it is because the medication has no value." This refers to such doses as those of Hoeppe and Fourdes, who gave 30 grains as a full dose in infusion, while in England 60 grains was administered at once. These were ordinary doses.

Jaccoud, who advocated digitalis, said to his students in his lectures: "Do not sleep in a false security; whether you prescribe too large a dose at one time or prolong beyond measure the administration of a large dosage, you *suddenly* pass from the therapeutic to the toxic action, and see what then happens! With or without gastrointestinal phenomena, with or without cerebral accidents, the heart weakens and takes an unaccustomed frequency; the pulse becomes small, rapid and compressible; the phenomena of venous stasis appear; the face becomes cyanosed; in one word, you have an artificial asystolia, which if it prolongs itself will kill your patient as surely as a spontaneous asystolia."

Digitalis Asystolia Demonstrated Years Ago

As early as 1856 Traube had demonstrated experimentally the digitalis asystolia. That these terrible phenomena are less frequently evident than they otherwise would be, is partly due to the uncertain strength of the plant or the part of the plant which has been used pharmaceutically. Jaccoud advises his pupils to examine their patients carefully and at short intervals, because in those who take digitalis for more than a day toxic effects appear in general with great suddenness. He mentions that digitalis requires incessant watchfulness.

Schroff wrote: "While the action of digitalis manifests itself tardily, we must not forget that when administered during a long time, or at short intervals, small doses can give place to grave accidents, and produce also the phenomena of poisoning."

Bouchut, a partisan of digitalis, affirms that "it is not necessary to go too far in its use if one does not wish to produce cardiac and pulmonary congestion. To avoid these dangers, we should show great moderation

in the dosage and continue the administration for very short periods." How this can be done without sacrificing the benefit of the remedy is a delicate problem. Since digitalis may cause a fall of thirty pulsations within one minute, an asystolia may supervene with the rapidity of lightning, striking without warning, without any appreciable phenomena preceding it. This disaster is the more liable to occur in an organism already gravely affected, the weaker the patient, the more anemic and the more inclined to heart-failure.

Seé, in 1884, called attention to the dangerous effects of digitalis. Riegel said: "With a measured dose, well-proportioned to the age of the child, one obtains a regular effect by administering digitalis twice a day, but much more surely yet if digitalin be employed." Jacobi also used digitalin for infants in fever, thinking that from it he had obtained advantages. Peter, in maladies of the heart, gave his preference to digitalin.

Fagart, in 1879, said: "Digitalis leaves alter readily. The powder has an irritant action on the skin and upon the mucosa. The organism does not become habituated to the action of digitalis. One should dread the dangers of accumulation, because the active principles of digitalis require a certain time for elimination, whence we have the irregular pulse, visual troubles, nausea and headache." This author used the infusion of digitalis.

Durozier, in 1879, said before the Academy of Paris: "In all its forms digitalis should be employed only in the smallest doses recommended. Its preparations should always be made with the greatest care. *It must be watched day and night.* It is in the night that most of its accidents occur. It should be given with the same reserve as belladonna. Alcoholic preparations are the most dangerous. The syrup is too strong. Trousseau's wine of digitalis ought to be called 'the wine too-digitalic of Trousseau.' The modified wine is too strong. In doses of thirty Grams a day it has caused accident, but we see it recommended in classic works in doses of fifty to 150 Grams. The

tincture contains the strength of one Gram in sixty drops, and many physicians prescribe ten drops, others 180 drops. In delirium tremens there is no longer a limit. What marvelous unanimity! The alcoholic extract is excessively energetic; ten centigrams cause vomiting, forty cause delirium. The powder in doses of ten centigrams has caused accidents." This was published in 1880.

Bouchardat said that "the alcoholic tincture of digitalis is an unsafe and dangerous preparation," and he confirms Durozier's condemnation of the wine. He expressed his preference for digitalin, saying Homolle did a very useful thing in separating digitalin, by means of chloroform, from the foreign products with which it was associated. "Today digitalin is a principle, perfectly defined, more active than the old digitalin and also more sure."

Dusch declared that digitalis should be employed with great care, on account of its paralyzing action on the heart. He says: "It is the custom to regulate the action of the heart in infants by employing especially small doses of digitalis, but with the same prudence as for adults; for infants are very sensitive to the action of this medicament, which besides can produce disastrous results on the digestive apparatus."

Riedel said: "Whenever we administer digitalis it is necessary to take often and without delay the rate of the pulse."

In 1874 Durozier communicated to the Society of Medicine of Paris a case, in which powdered digitalis had been given in the dose of fifteen centigrams, which killed the patient in a very short time. He asked if an accident following so quickly should be attributed to the medicament or to the fatty state of the myocardium revealed by the autopsy. He favored the first supposition, the patient having in his last moments shown evidences of the toxic action of the digitalis. Peter, after speaking of fatty degeneration and the extreme difficulty of its diagnosis, took up the use of digitalis and expressed himself thus: "There is the danger of digitalis! I employ it very little, and reluctantly (*comme a contre cœur*). I

distrust it. I dread it. I employ it only as a regulator of the heart's movements, when they are very irregular and tumultuous. One should never administer digitalis for long, under any form; its use should be suspended at times; it is necessary to know—and it can not be repeated too frequently—that digitalis is a formidable medicament, full of perils. The knowledge of the dangers of digitalis is of the utmost therapeutic importance, and in the maladies of the heart the beginning of wisdom is the fear of digitalis." Durozier added that in presence of his observation he is astounded at the toxic effects of digitalis.

Experiments made with crude preparations of digitalis, by the most illustrious masters, display the most remarkable contradiction as to the phenomena resulting.

Rasori termed digitalis the disturber of the heart *par excellence*; as did Cantani. Giacomini calls it a contra-stimulant; Trouseau, a sedative of the myocardium; Cullen and Bouillaud, "the opium of the heart." Wood called it a heart-stimulant; Bartholow, an excitomotor; Cantani, a cardiac narcotic; and Husemann, an antipyretic.

With such an arraignment it is not to be wondered at that in France and Italy it has for many years been abandoned in favor of digitalin. "As in America, Germany has not yet settled upon a preparation of digitalis, and few years elapse in which we do not see some new preparation of this priceless medicament presented. Generally it is some new active principle that is announced as the one for which we all have fervently been waiting. When this occurs, the French forthwith angrily attack it, show that it is only a combination of previously known principles, and adhere to the preparation that has given them satisfactory service for nearly half a century."

The Author's Experience in Brief

The same unanimity prevails among those who employ the Germanic digitalin in America. The latter is the quickest in getting to work of all the digitalis principles.

The writer frequently has recognized its effect within half an hour after the dose had

been given, and other good observers have stated that the effects become manifest in a few minutes. It is soluble in water, and for this reason it acts more promptly and also can be used hypodermically without undue irritation. Of all the digitalis glucosides Germanic digitalin exerts the greatest heart-toning power and the least contractile effect on the blood-vessels, and for these reasons—its solubility, its heart-tonic action, and its slight vascular tension—it is the safest of the digitalis preparations; also because it is the most readily eliminated. I have never known cumulation to occur from its use, nor has such an action ever been reported to me.

Beates has given this preparation for many years, in doses of 1-10 of a grain and upward. His last published report showed that he had even increased the single dose to two grains on occasion. One might be tempted to say, this being the case, that ordinary doses had little effect, but this is not true. In ordinary cases digitalin is safe up to doses of 1-4 of a grain. However, since it is never wise to give more of any medicine than is needed, I prefer to give the granules containing one milligram each, repeated every half to one hour until exactly the required degree of tonicity has been secured. This is not so much from a dread of the toxic effects of the remedy as from the conviction that, to secure the best results from it, the utmost nicety is to be employed in exactly fitting the dose to the needs. If exactly normal force of the heart and tension of the vessels is secured, the circulation is facilitated. If the dose is pushed beyond that point, we shall have a reactive depression of the heart's force, and by undue contraction of the vessels an obstacle would be placed in the way of the heart fulfilling its function. Both these elements would make for weakness, after preliminary stimulation.

To those who appreciate at its full value the importance of this suggestion, digitalin is indeed a priceless friend in need. To those who only realize that digitalis is a "remedy for heart disease," its application

is fraught with perils which unnerve one to contemplate.

The Objections to Digitalin Answered

Since the superiority of digitalin is so firmly established in France, why is it that this preparation has not been similarly accepted in America? The reply requires but a single word—commercialism.

Moneyed interests, as represented by the great pharmaceutical manufacturers, have no desire to push a remedy unless they control its supply. Digitalin is not a remedy that is subject to monopoly control. The variability of the digitalins of the open market has been exaggerated. The fact that either of the forms of this article, Nativelle's, Homolle's or Finzelberg's, is free to any chemist who chooses to prepare and market it, having absolutely no protection by patent, secret, copyright or any other excuse for the establishment of a monopoly, has been ignored; while every possible effort has been made to devise and exploit some form of this priceless medication that may be made to yield a tribute, from the sufferers who must have it, to selfish greed.

To all the fluid preparations of digitalis, including the three most recent proprietaries, digitalone, digalen and the fat-free tincture devised, we believe, by Puckner while in the employ of Searle and Hereth, the same objection holds good: they never remain the same for any length of time. No matter how accurately they may have been standardized, there are two processes at work to alter their strength: the spontaneous decomposition that goes on in all fluid preparations, and the evaporation of the alcohol and water of the menstruum. The result is a precarious and constantly shifting balance between these two antagonistic processes. The drug is worth its original value, *plus* the concentration by evaporation, and *minus* the decomposition. The solution of the problem may be found only by trying the medicine on the patient. Pure digitalin, made into granules with pure milk-sugar, does not alter perceptibly in twenty years.

EVERY-DAY OBSTETRICS: A SERIES

This article is the first of a series in which the problems of obstetrical work will be discussed from the viewpoint of the "every-day" doctor

By WILLIAM RITTENHOUSE, M. D., Chicago, Illinois
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INTRODUCTORY

I OFTEN hear general practitioners say that they dislike obstetrics and that they would gladly eliminate it from their work if they could. When pressed for detailed reasons they refer to the irregular hours, the loss of sleep, and the interference with general business. But many of them will admit that the real reason for their dislike lies deeper than this, namely, in the unsatisfactory results so often obtained: the difficult forceps deliveries, the frequent lacerations, the malpositions, the prolonged and agonizing suffering of the patient.

Most of these men are inclined to be skeptical when you tell them that many of these unsatisfactory results are avoidable, that the lacerations can be reduced to a minimum, that the postpartum hemorrhages are due to removable causes, that the malpositions do not usually require the help of an expert for their correction, that the forceps deliveries often call more for the use of brain than muscle, and that there is balm in Gilead even for the cases of prolonged and agonizing suffering.

We usually like work that we can do well. If we get satisfactory results in any difficult field of endeavor we are not greatly disturbed by fatigue, deprivation or physical discomfort. The vast majority of the profession are not lazy. If they believed that the results in obstetrics were as controllable as they are in surgery there would be little complaint. To demonstrate that they are thus controllable is my object in writing these articles. I shall feel amply rewarded for the labor of their preparation if I can convince some of the readers of CLINICAL MEDICINE that obstetrics need not remain

in its present unsatisfactory state, and to enlist their aid in its emancipation from the thralldom of tradition.

Obstetrics Hampered by Tradition

In that last word, "tradition," lies the root of the difficulty. Obstetrics, more than any other department of the healing art, has been hampered by tradition. Medicine and surgery have been revolutionized during the last quarter of a century, while obstetrics, aside from the application of asepsis, has remained bound by the rules and traditions of the past hundred or more years. It is so much less trouble to follow a rule than to think for oneself. Rules, like fire, are good servants but bad masters. I am not decrying the value of rules; neither am I belittling the wisdom of our ancestors. St. Paul's admonition, "Prove all things, hold fast that which is good," is as good advice in obstetrics as it was in religion, but some doctors overlook the first half of it. Every member of the profession should constitute himself a committee of one on the "revision of the rules."

The man who invented the expression, "meddlesome midwifery," may have done some good in his day, but he has also done a vast amount of harm in preventing progress. It is singular, almost amusing, how most men fear an epithet. Many a man fears to depart from the rules laid down in the books lest he be accused of "meddlesome midwifery." But all progress is "meddlesome" from somebody's point of view, and epithets are harmless; those who employ them usually are incapable of logical reasoning. So, if obstetrics is to be brought abreast of its sister sciences, medicine and surgery, it will be necessary for the

men who practise it to assert their independence, and while they study books, to study cases more, and, above all, *to think for themselves*.

In this series of articles I shall occasionally express views which differ from the teaching of the past. Those views are the result of my experience. If they are right, they will ultimately prevail. If they are wrong, I shall rejoice to see them corrected by a broader experience than my own.

Every obstetrical patient should engage her doctor some weeks in advance of her confinement. This is not only conducive to her own safety and physical welfare, but failure to do it is unfair to the physician. I do not allow even my old families to spring an obstetric case upon me at a moment's notice. In the case of a new patient the doctor has a right to time enough to investigate her financial ability and reliability. In all cases he should know what work is before him, so that if he wishes to leave his practice for a needed vacation he may select his time to the best advantage. The patient will be even a greater beneficiary than the doctor because many of the complications of pregnancy and labor may thus be averted.

Eclampsia, for instance, can nearly always be prevented if the doctor is informed in time of the symptoms that forewarn its approach. The patient, therefore, should be told to report promptly any marked disturbance of her health and, especially, any swelling of the lower extremities. It is true that edema does not always mean albumi-

nuria but may be due to pressure on the return circulation; but as the patient cannot decide this question, she should give the doctor the opportunity to do so.

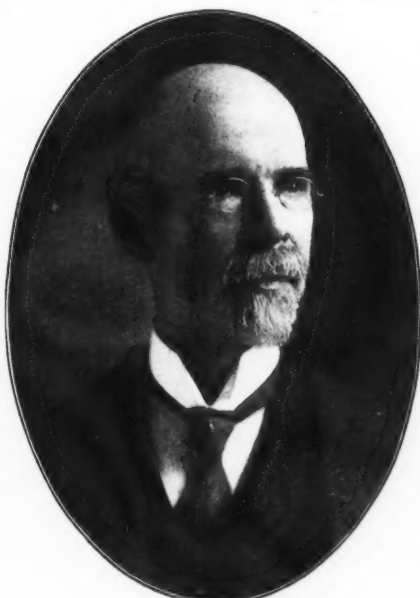
Constipation and Diarrhea.—The patient should be instructed not to neglect constipation, because of the effect that it may have both upon her comfort and her health. She should be cautioned against

the indiscriminate use of purgatives, as some of them are injurious to a pregnant woman. The doctor rather than some friend or neighbor should do the prescribing. Aloes should not be given to pregnant women. It may cause premature labor by its irritating effects upon the large intestine. For the same reason an attack of diarrhea should never be neglected.

The Nipples.—The torture which mothers often endure from the infant nursing at a fissured or ulcerated nipple

may often be avoided by treatment before labor with a view to hardening the integument covering the nipple. For this purpose astringents are most effective. Tannic acid, 20 grains, to glycerin, 1 ounce, applied daily, is a favorite with some. I prefer alum because it does not stain the clothing, and also because of its convenience. Let the patient keep a lump of alum on her dressing table during the last two months of pregnancy and once a day slightly wet the nipple and gently rub it with the alum crystal. The more convenient a method is the more likely it is to be carried out faithfully.

Outfit.—The patient should be instructed as to what she should provide against her approaching confinement. Here there is



DR. WILLIAM RITTENHOUSE

a wide variation in the custom of various physicians, some leaving the whole matter to chance, while others order so extravagantly as to lay a heavy financial burden upon people of moderate means. With people who have only a small income the doctor who puts them to unnecessary expense thereby renders more remote the payment of his own fee. I usually limit my orders to three things: (1) a protection for the mattress, (2) safe material for vulvar pads, (3) antiseptics.

For the first, a piece of common table oil-cloth answers every purpose and is cheaper than a rubber sheet.

For vulvar pads one may order half a pound of absorbent cotton, and five yards of gauze for covering the same. Cotton alone is unsatisfactory because of its tendency to adhere to everything. If the patient has kept house for a long time she may have plenty of old sheets, etc., which she can use for pads. In this case she should be taught how to sterilize them.

For antiseptics I usually order half a pound of powdered boric acid, and two ounces of lysol.

Have the Obstetric-Bag Ready

The obstetric bag should contain everything that is needed in the most common emergencies of this work, and this equipment should always be kept in the bag. Then if you have to send a messenger for it you can be sure that it will contain what you want. The method which some doctors follow of assembling the outfit when starting for each case often results in something being forgotten, and makes it impracticable to send a messenger for the bag when in a hurry.

What this outfit should consist of is a question that each practitioner must decide according to his own needs or his own fancy. Some carry almost nothing, others carry so much paraphernalia as to make a heavy burden. My own bag is the medium between the two extremes. In the past twenty years I have reduced its contents rather than increased them. Some would object that it is too limited, but it has not disappointed me although I am often some dis-

tance from home, since my work is scattered over a radius of twenty-five miles.

My Obstetric Bag Contains

Forceps. Some carry a pair of small forceps because of their lightness, but they are often inadequate, so I carry a single pair of long ones (Hodge's).

Hypodermic Case, with tablets of morphine sulphate gr. 1-4, strychnine sulphate gr. 1-60, and hypodermic tablets of morphine, hyosine and cactin.

Needle-holder, curved needles 1 inch to 2½ inches long, silkworm gut, silk, catgut.

Ligature for umbilical cord, consisting of common knitting cotton (to be doubled for use).

Absorbent Cotton and Gauze, one ounce of each.

Catheter (soft rubber).

Chloroform; at least two ounces. Formerly I carried an inhaler, but have discarded it. At present I use a tumbler with a small napkin crushed into the bottom. My reason for this is that I often have to give chloroform in a room with a burning gas jet, and only those who have experienced it can realize what terribly irritating fumes may be produced under those circumstances. The tumbler inhaler permits much less chloroform to escape into the room than the ordinary mask. The first time I had experience with these fumes I did not know what was causing the trouble. I began to cough up bloody froth, and it was almost impossible either to speak or breathe. A singular feature was that the other persons in the room were but little affected. Not long after this occurrence a similar case was reported from Vienna where the doctor died and the nurse narrowly escaped. It is worth remembering that ammonia liberated in the room neutralizes to a great extent these dangerous fumes.

Brandy, two ounces. If an emergency, such as collapse, demands brandy, I like to be sure of its quality and also that it is at hand for instant use.

Ergot, best obtainable, one ounce.

Tinctura Opii Deodorata, one ounce, for false pains and afterpains. I prefer this

to any other opiate because the patient does not recognize it, and because it is less constipating.

Lysol, two ounces.

Bichloride Tablets, a liberal supply.

Tincture of Veratrum Viride (Norwood's), one dram, hermetically sealed, to prevent deterioration. I prefer Norwood's because of its reliability and greater concentration, being fully four times as strong as the ordinary drugstore samples. This is my sheet-anchor in eclampsia, and I carry it because when I want it I want it quickly and at the same time want to know its exact strength. [We wish that Dr. Rittenhouse would try veratrine, as a substitute for the veratrum viride.—Ed.]

This completes the list of the contents of my obstetrical bag.

Shall the Doctor Wear a Gown?

Gown and rubber gloves are regarded by many as essential, but I do not carry them. I have heard two reasons for wearing a gown in family obstetric work, but neither of them appeals to me. The gown is supposed to protect the doctor's clothes from being spattered, and also to protect the patient from the wicked germs that have stolen free transportation on the doctor's clothes.

As to the first reason, I have always made it my aim to do my obstetric work so neatly that my clothes are not in danger. It is true that I have occasionally been spattered by some careless or excitable doctor or nurse with whom I was working. If the doctor was a bigger man than I, I simply "sawed wood" and said nothing. If the nurse was the guilty party (and this was rare) I took her aside later and gave her a gentle lecture on the importance of care and coolness in obstetric work.

As to the other reason, namely, protecting the patient against danger of infection from the doctor's clothes, my verdict would be "important if true." But my experience has failed to reveal this danger. If the doctor's personal habits are what they should be, especially when dealing with

contagious and infectious diseases, I do not think he is very likely to carry germs to his obstetric cases.

I admit there are men in the profession who will sit down on the edge of the bed of a scarlet-fever or erysipelas patient, or who in dressing a suppurating wound will infect not only their hands but their clothing. Within the past year I saw a doctor who, in examining the throat of a diphtheria patient had got saliva over his hands, take out his pocket-handkerchief, wipe his hands with it and put it back into his pocket. What such a man needs is not so much a white gown as a striped suit, or to reform his personal habits. No linen gown could adequately protect his obstetric patients—nothing less than air-tight boiler-plate.

I do not object to anyone wearing a gown if he chooses to do so, but I protest against the assumption, too often made, that those who do not wear gowns are behind the times.

Some may wear them because of the impression produced upon the minds of their patients; and while I am not saying that this may not under certain circumstances be justifiable as a measure of self-defense, yet this motive borders so nearly upon quackery that I am inclined to be chary of it.

The Use of Rubber Gloves

As for rubber gloves, I regard their routine use as one of those fashions which come and go. I believe from my observation in Chicago that it is already on the wane. If the doctor has an abrasion on his hands it is safer in my opinion to rely upon collodion than upon the gloves. I have known of half a dozen cases of infection of the surgeon's hands in spite of rubber gloves. Two of them were fatal.

On the other hand, the claim that gloves are necessary to protect the patient from infection from the doctor's hands is a confession of imperfect sterilization of those hands. They blunt the fineness of the sense of touch, and, in my opinion, do not offer advantage sufficient to counterbalance this drawback.

A DOCTORS' COOPERATIVE HOSPITAL

This article tells how the physicians of a Colorado city were able to accomplish a practical cooperation, which has proven of great benefit to themselves and to the community

By E. GARD EDWARDS. M. D., La Junta, Colorado

FACTS and figures are oftentimes more dry and tedious to one listening or reading than fine-spun theories; but, in this instance, presenting a history of the success of what, for a better term, I am calling "A Doctors' Cooperative Hospital," I trust I will be introducing a subject that at least will be of interest to that part of the medical fraternity who live outside of populous centers.

Unlike some members of the profession, I do not believe that the physician's sole duty is accomplished in serving his patients to the detriment of his own time and pocket-book, and I fail to see why, equally as well educated in most instances as his urban brother, the country practitioner should toil along, content to see his best-paying cases hurried off to the city, where some smiling confrère pockets the coin of the realm and leaves his fellow practitioner to the empty glory of being credited with sense enough to have sent the sick one away from home. Our profession need not be mercenary because we demand at least a good living while on earth and a competence for our families after we are gone; and I believe that the greatest factor toward the country practitioner improving his financial condition is the establishment of local hospitals so that he can care for his own patients.

In days gone by, a very great many patients were obliged to go away from home for treatment as a natural result of inability to care for them because of lack of proper facilities, but the opening of the "Hospital Age," as someone has aptly termed it, has made it possible, except in extreme cases and in very sparsely settled sections, to keep our patients with us. Incidentally, this is economy for the patient, money for the local practitioner, and an incentive for

the latter to keep abreast of the times in order to be prepared for any emergency that may arise, whether it be of a medical or surgical nature.

Twenty-five years ago the "provincial surgeon," as he has been called, began feeling his path in a timid sort of way, and to him, rather more than the physician, is due the rapid multiplying of country hospitals, because of the need with him more particularly for a place in which expediently, and possibly more safely, to perform his work.

Principles Underlying Success

Few men, however, except in the larger communities, have clientele sufficient to support a hospital unaided by their professional brethren, and the latter are, for reasons not necessary to enumerate, not in the habit of being overenthusiastic in aiding local enterprises of this character. Granted the need of hospitals in all fair-sized communities, the solution of their successful financial conduct (and this is the rock which looms very high on the business sea), depends:

First: On the cooperation of the local physicians, in support of the proposition.

Second: An institution built not too large for the community which it is intended to serve.

Third: Economical administration and an unceasing watch on the little things in matters of expense.

Fourth: The sinking of all personal differences among the local practitioners, at least so far as the institution is concerned.

Fifth: A certain element of charity providing for the acceptance, free of hospital charges, of worthy people who should not be subjected to being classed as paupers.

Sixth: Organization under a charter providing for the last-named feature in order to avoid taxation and to be able to ask support, by voluntary contributions, from charitable persons.

Seventh: Conservatism in treatment, whether medical or surgical, for the reason that all things are known to all people in a small city. A few dismal failures will be proclaimed from the housetops to the detriment of both the institution and the profession.

Eighth: The educating of the people to the manifold advantages of hospitals

The history of our institution at La Junta, Colorado, is substantially as follows:

History of the La Junta Hospital

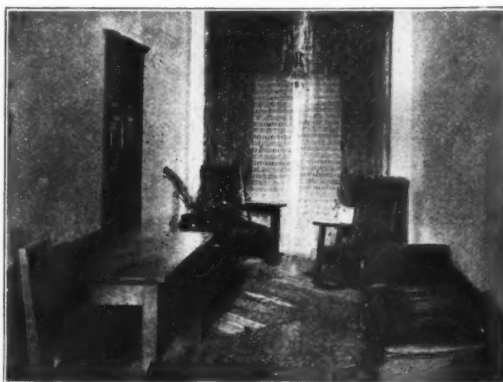
Three years ago an agitation was begun among the local profession looking toward the fitting of a suitable building for a hospital. At that time—and the conditions are still practically the same—there was a population within the city limits of about five thousand people, a very small tributary country, and the A. T. & S. F. railroad hospital taking care of the majority of the male subjects of the town; but to this institution railroad employees only were eligible. There was a small floating population, living in furnished rooms and lodging houses, who were without a home if stricken with illness, and, even the best families, as seems customary, so far as I can see, in rural Colorado, were housed in dwellings so small as to render it impossible easily and properly to care for many kinds of illness.

By the local physicians the matter was brought before the business men of the town, and a charter was obtained to conduct a hospital on a profit-bearing plan. Not deeming it advisable to go to the expense of erecting a building at this time, thirteen hundred dollars in stock was subscribed, to furnish a suitable house, this stock being principally distributed among the physi-

cians and merchants, the latter being induced to take up the matter on account of the probable returns from supplying commodities necessary for the maintenance of the institution.

Organization of the Hospital Association

This association elected as its officers a president, vice-president, secretary, treasurer and a house committee of two. The

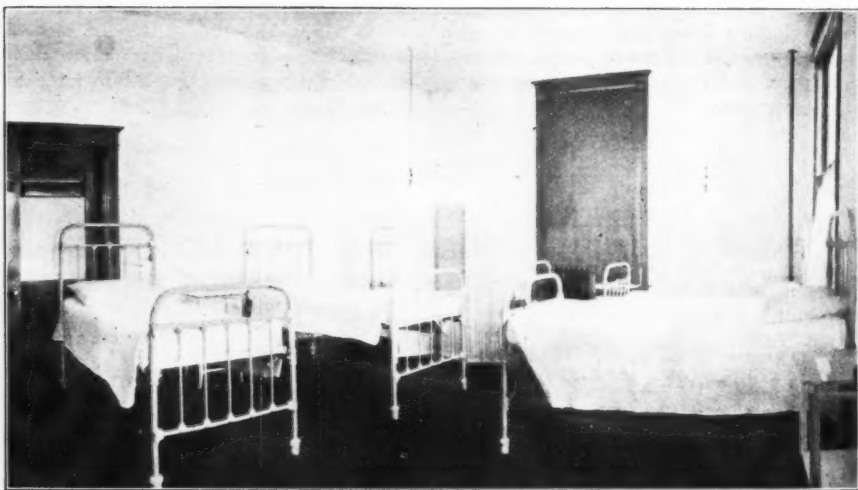


The Reception Room

rules and regulations were few and simple. Moneys were collected, by the secretary, from the matron, turned over to the treasurer, and expended by vouchers signed by the house committee, secretary and president. All supplies, except groceries, etc., were ordered by the house committee, who also had charge of hiring the necessary help.

A system of numbered receipts issued by the secretary to the matron, duplicating ones issued by her to the patients, made it possible by reference to the bank deposit to check up accounts in a few minutes for a month or several months' work.

No drugs were furnished by the hospital, so that the prescription trade (and we are all prescription writers) of the drugstores was not in any way affected, and no expense was incurred for this item on the hospital part, except for antiseptics, washes and like commodities. Cases of tuberculosis, erysipelas, scarlet-fever, cerebrospinal meningitis, diphtheria, and smallpox were de-



A Ward in the La Junta Hospital

clared nonadmissible. One physician was appointed to serve each month to look after patients entered without an attendant physician during that period. Cases under the care of a physician could not be accepted by another while in the institution. Each physician entering a patient was held responsible for that patient's hospital fees. I consider this last the most important rule of the institution.

A building—a story and a half, brick, 30x40—was leased (and this, by the way, was the only available house in town), and furnished by funds derived from the sale of stock, aided by voluntary contributions of furniture from fraternal-society sources. This building comprised, on the first floor, a men's ward of three beds, a women's ward of the same number, one private room, small operating room, bathroom, and a combined kitchen and dining room. On the second floor were three private rooms, and a ward for three patients (the latter being used for either sex, as the occasion demanded). A trained nurse for day and one for night, with an experienced helper for each, a housekeeper and a janitor made up the help. These were all lodged outside the building. Crowded, of course,

as the hospital was, it was frequently necessary on the part of all of us to change our patients from one ward to another in order to accommodate a brother practitioner.

The hospital fees were as follows: Ward, \$12.25; private, \$17.50; operating room, \$2 to \$10. More than one surgical dressing at estimated cost to the association. Special nurses when on duty in the hospital were boarded free of charge.

What Two Years' Experience Showed

For two years this institution was run. During that time 347 patients were treated: 213 medical, 127 surgical, 7 obstetrical. The surgical cases included 73 different conditions and necessitated some 130 operations. Altogether 33 abdominal operations were performed, 5 amputations, 3 for gun-shot wounds, 2 hernias; the rest were of the nature such as are found in general practice, including also the varieties of one case each of actinomycosis and elephantiasis of vulva. The mortality from all surgical procedures was five, 3.8 percent. Excluding a case of multiple perforation of the intestines due to a gun-shot wound, and a gun-shot wound of the brain, both practically moribund when admitted, the percent

rate was 2.3. Of the remaining 3 deaths, 2 were caused by general septic peritonitis, due in each case to a ruptured appendix, so that only one death, due to ileus following the removal of a pus tube, could possibly be laid to preventable causes: a mortality of little over one-half of one percent. These operations were performed by nine different men; the abdominal by four.

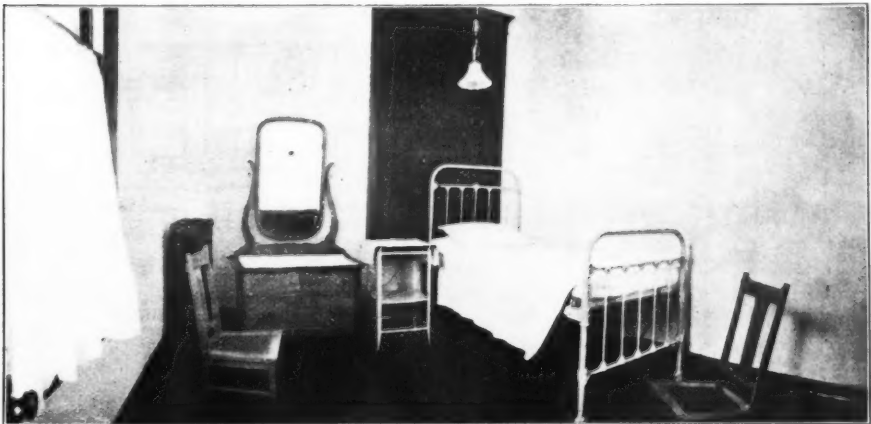
On the medical side 119 cases were typhoid, 8 pneumonia, the remainder being divided among 49 diseases. The mortality was 19, or 8.8 percent. Of these 6 were due to typhoid (a mortality of 5 percent for this particular disease and all due to perforation or hemorrhage), 3 to pneumonia, 3 to meningitis, 2 to obstruction of the bowel (both too advanced when admitted to allow of anything but medical treatment), 2 to valvular heart disease, and delirium tremens, dropsy, peritonitis, 1 each.

Then as to the expense of management. The average monthly pay-roll was \$190.00. The matron was paid \$50.00 per month; night-nurse \$40.00; experienced helpers, i. e., nurses of one or two years' training, \$30.00; housekeeper \$30.00, and the rest for janitor work. The average rental, including outside rooms for nurses, was \$60.00 per month.

During the two years the stock would have paid a dividend of some 20 percent,

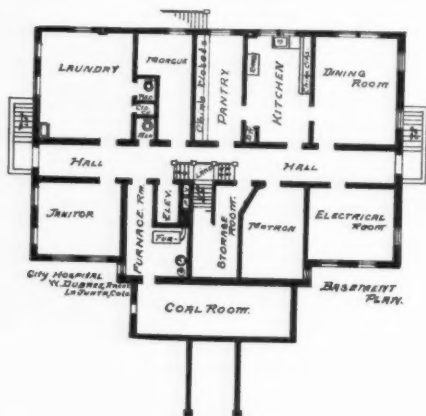
or about \$11 profit per month. However, by common consent, the need of a larger building being more and more apparent, this surplus was donated to the new association organized under the charity law, and a campaign inaugurated to raise funds for the new enterprise. Four months' work in soliciting subscriptions, together with a "Street Carnival" and a "Tag Day," netted about \$10,000. Plans were made for the new building, and a mortgage of \$10,000 laid on the same.

February 15, 1908, the new City Hospital was completed. This building is situated on a half block on the outskirts of the town, at an elevation giving not only a beautiful view of the city but also of the surrounding country. Constructed of concrete, in mission style of architecture, it contains on the ground floor, which is in reality the basement, two rooms for help, engine-room, laundry, morgue, kitchen, dining room, and a room designed for electrotherapeutic work and physiological apparatus. On the second floor are, in addition to the halls and office, two female wards of four and five beds each, one male ward of four beds, a beautiful lounging room, bath-rooms, closets, toilets, preparation room, general operating room, minor operating room and obstetrical room. On the third floor a male ward of four beds, children's ward of three beds,



One of the Private Rooms in the Hospital

seven private rooms, two rooms for help, a lounging room, closets, bath-rooms: giving twenty-seven beds, which however can, without crowding, be increased to thirty. An elevator, a dumbwaiter and electric signal system are among the accessories.



The building cost \$19,000, exclusive of the elevator, which aside from the shaft was not installed, and the laundry, morgue and electrical room, which are left unfinished.

The Dimensions of the Building

The main dimensions of the building are 43x68 feet. This gives us wards 16x20, 12x20, 15x16, 12x18½, 12x13½ feet; office 12x14; operating rooms, 16x14½, 12x12 and 12x14; preparation room 10x12; five private rooms 10x12, and five 9x12 and one 10½x12; laundry 17x19; kitchen and pantry 21x19, dining room 16x20, and halls 6 feet wide; besides the other rooms that were mentioned as unfinished and the lavatories, bath-rooms and closets.

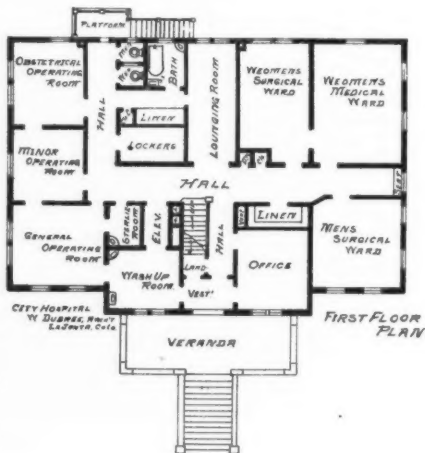
The lounging rooms are so arranged that they will serve as halls in case of future enlargement of the building. Floors, unfortunately, were made of Texas yellow pine instead of hardwood; further, too, much wood-work in the way of door and window frames, etc., was incorporated, contrary to modern ideas of hospital construction. The building is heated by steam—which, by the way, is a mistake. The initial ex-

pense, it is true, is less than for a hot-water plant, but not so with the running expenses. By appealing to the generosity of individuals and societies, all private rooms, office, dining room and one lounging room were furnished by them. In addition to furnishings given the new association by its predecessor, and rooms furnished by societies and individuals, \$900.00 was expended in equipment as fixtures, a total expense of some \$3,500.

The dining room, office and lounging rooms are furnished in mission style, the private rooms with the usual hospital bed—two chairs and a small bureau of maple—the only exception being the largest private room which is furnished in oak and has one extra bed for the use of cases requiring a special nurse.

The Necessary Running Force

The personnel of the force necessary for its conduct are a matron and one (sometimes two) helper, night-nurse and helper (the helpers are experienced, the head nurses trained), a janitor and housekeeper. The rules and regulations are practically similar to those which obtained under the old charter, except provision is made for the reception of worthy charity patients with the consent of a committee composed of the secretary, treasurer, house committee and president.



The total expense, for the first six months ending August 15, 1908, and exclusive of the interest on the mortgage, was about \$3300, the income \$2978.66, or an average of about \$500 per month, thus leaving a deficit of \$322, or a little more than \$2.00 per day. This shortage however can be overcome by curtailing expenses in the ways mentioned at the conclusion of this article. In the monthly expense list we find \$220 for salaries and an average of \$150 per month for groceries.

During the time indicated there have been treated 128 cases, divided as follows: medical 61, surgical 61, obstetrical 6. The surgical cases show a mortality of 3, equivalent to 5 percent, or (excluding a stab-wound of the stomach, the patient practically dead from hemorrhage when placed on the table, and a case of necrotic femur, in same condition) of less than 0.5 percent. Of these cases 21 were laparotomies, of which one was a complete and one an incomplete hysterectomy. The mortality, on the medical side, was 6—equal to 10 percent. Deaths were caused by dilation of the heart, thrombosis, cardiac dropsy, meningitis, 1 each, and 2 from pneumonia.

To what extent the hospital has benefited the community and the profession would be hard to estimate.

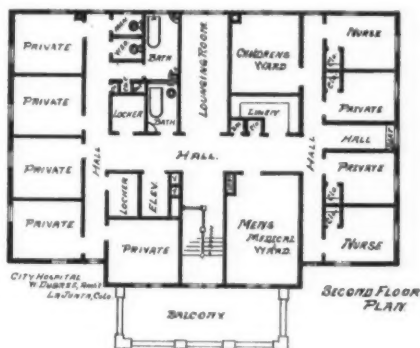
Incidentally I might add that neither of the institutions were established without work, and hard work, nor without opposition. A select coterie of our supposedly "best citizens" were very insistent in howling about the "doctors' graft," and this in spite of the fact that under the new charter any profits, should they accrue, must be turned into a sinking fund. We no longer hear this complaint.

A Benefit Both to Profession and Community

I am satisfied this hospital has saved many a dollar to the sick by reason of the lessened expense of nursing, and so forth. To the profession, on the other hand, it has given an added respect for the abilities of

the other men, and I feel safe in saying it has added a very large amount to the income of every practitioner because of the facilities for doing work from which he formerly shrank, not because of inability to do it but because he lacked a proper place.

It was scarcely expected, except by one or two optimistic and sanguine spirits, that an institution of its size could be made to pay expenses in a town with the population



of La Junta, but we figured on building now to accommodate for future growth of the community. This goes to show, as was stated in the early part of this article, that one of the essentials in the successful financial conduct of an institution of this kind is to build according to the law of supply.

We could, from its own income, support an institution for eighteen patients, basing the calculation on the success of the first scheme, which provided for thirteen. However, our expenses can be cut very materially by installing a laundry, supplying our own milk, buying staple groceries in wholesale quantities, while operating as we do under our charity clause of the charter, we expect, through the aid of a ladies' auxiliary committee, to care very readily for the small deficit for which we look, until the growth of our community is sufficient to supply a thirty-bed institution.

SURGICAL AND GYNECOLOGICAL NOTES

BY EMORY LANPHEAR, M. D., LL. D.

FRACTURE OF OLECRANON

Sometimes there is but little separation of the fragments; in which case immobilization of the joint with the forearm at full extension is the proper treatment, for three weeks, followed by massage and passive motion. But when the periosteal, tendinous and fascial tissues are so torn that the triceps has pulled the tip of the olecranon far out of place, excision of the bony fragment is the best treatment and gives good results if done quite early.

AFTER-TREATMENT OF PELVIC ABSCESS

When the abscess is drained through the vagina the packing must not be disturbed until at least two days have passed, and usually it is best to leave removal until the third day. Then the gauze is carefully removed and the cavity irrigated with saturated solution of boric acid. It is useless to try to repack the abscess; all that can be done is to push a few strands of gauze through the vaginal cut and then loosely tampon the vagina. This drain may be removed and renewed every other day. As the cavity contracts and fills with granulations less and less gauze must be used, care being taken not to injure the granulations by too much pressure. Generally in about ten days the drain need be no longer used, vaginal douching twice daily being all that is necessary.

When drainage is made by packing the pelvis through the suprapubic incision the outside dressings must be changed as often as they become saturated, but the gauze next to the wound must not be disturbed until the end of 48 hours, or even the end of the third day when there is continuation of discharge; then the gauze is carefully withdrawn by catching each strip separately with hemostatic forceps or dressing-

forceps, chloroform sometimes being necessary if the patient be very nervous. If the cavity is large, or the whole pelvis involved, a little gauze (two or three strips) must be pushed to the bottom and other strips inserted until the cavity is loosely refilled; but if it be small only one long strip may be needed. This drain must be removed in two or three days, when there will be a large amount of pus; this is to be cleaned out by gentle mopping with pieces of gauze on dressing-forceps or hemostats, and new packing inserted. Very bad cases require cleaning out daily, any shreds of dead tissue being cut away with scissors; but after granulation is progressing well the less the wound is disturbed the quicker it will heal.

Therefore no irrigation, no boiling out with peroxide, no violent attempts to clean the granulating surfaces (which must not be made to bleed)—just simple removal of the pus and a fresh gauze drain is advised. If provision be made for perfect drainage, nature will take care of the healing. If granulation is too slow some iodoform may be dusted in or iodoform-gauze used for the drain; or balsam of Peru may be smeared on the gauze which is to go into the depths. The skin around opening may be cleaned with bichloride solution (the patient's mind is made easy by this) or water, and if much irritated by the discharge, may be covered with boric acid; but as any powder is apt to cake and irritate it is best, generally, to depend entirely upon the sterile gauze dressings.

ENCHONDROMA AND PREGNANCY

An enchondroma of the pelvis may necessitate cesarean section. Quite a large number of cases of this trouble have been recorded. As the bony growth is likely to grow with great rapidity during gestation it is perhaps best to remove the tumor, even

at the risk of producing abortion, as soon as discovered, though it is a most hazardous undertaking. When found late in pregnancy it may fill almost the entire pelvis; in which case the cesarean operation is to be done invariably.

ARTHRITIS OF CHILDHOOD

Inflammation of the joint of nontraumatic origin may originate from invasion of the joint by the pneumococcus; and children are not exempt from this trouble. About 90 percent of pneumococcus arthritis of adults follows lobar pneumonia, about 25 percent in childhood, the remainder being due to otitis media, bronchitis or measles. From a most careful investigation Furrer draws the conclusions: (1) Acute arthritis occurring in an infant or child coming on from three to fourteen days after the onset of a pneumonia, and accompanied by pain and swelling, may be suspected to be a pneumococcic arthritis; (2) an acute or subacute arthritis developing without signs or history of pneumonia may be due to the pneumococci; (3) an acute osteomyelitis generally shows more profound constitutional symptoms; pain is more likely to be referred to the shaft of epiphysis; (4) acute articular rheumatism is very rare in infants and uncommon in young children. A high leucocyte count favors arthritis of pneumococcic origin; (5) tuberculous arthritis is insidious in onset and chronic in course, generally monoarticular; (6) gonorrheal arthritis is less acute in onset.

SNAKE-BITES

With any snake-bite the wound should be filled with permanganate of potassium, well rubbed in; and a few drops of 25-percent solution should be injected around the site of the injury. If seen early, a tourniquet should be applied a little above the wound, gradually loosened, a little each hour. The Western treatment, as much whisky as necessary to produce a "dead drunk," is efficacious—chiefly because it does away with the deadly fear. Two tablets of hyoscine-morphine, an hour apart, hypodermically,

will do almost as well, though the profuse perspiration induced by the whisky probably helps to eliminate the poison quickly. Pilocarpine hypodermically is also of benefit for this same reason. A good saline cathartic's also excellent if given as soon as possible. When the heart flags (from the acute sepsis) strychnine, digitalin and sparteine may be administered, hypodermically. Hypodermoclysis is of value, also, to stimulate the flagging heart and help rapid elimination. Incision and sucking of the wound at time of bite often extracts much of the poison.

TREATMENT AFTER APPENDECTOMY

Treatment after appendectomy does not differ from that after any other abdominal section if the belly is closed, save in that a cathartic should not be given until 72 hours or more, in order that firm adhesion of serosa to serosa over the site of removal of appendix may have time to form; and even then an occasional leakage occurs. But when drainage is instituted the management is quite different, locally. In applying the binder after the operation, and at all subsequent dressings, great care must be taken that there is no pressure directly over the site of drainage. Most periappendical abscesses are now drained by gauze, so the only thing to be done for the first two days is to change the cotton and outside layers of gauze as often as they become soiled.

When fecal fistula is present, this change should be made often, as the smell is quite offensive, particularly in hot weather. The gauze next to the wound may be changed as early as the fourth day and it is safe to remove all of the packing on the fifth day (though a week is better). In removing the packing the last piece put in should, if possible, be the first removed, but often it is impossible to tell which is last, and frequently the whole mass comes away together when the opening is large. Through an inch incision it is best to draw each strand separately and slowly, particularly those portions lying next to the intestines and omentum, i. e., nearest the midline.

In rare cases as late as on the sixth day the adhesions will be so weak that omentum, and still more rarely intestine, will follow the last strip of gauze; in which case the protruding mass must be quickly pushed back into the belly and fresh sterile gauze crowded down upon it, and this should then not be disturbed for three or four days. Under no circumstances should the cavity left on removal of the gauze be washed out with peroxide or other solution, for some small opening into the general peritoneal space may be present through which fatal infection might occur if fluid were poured in. All that is needful is to clean out the pus, feces, etc., by means of pledgets of absorbent cotton on forceps or wooden toothpicks. When satisfactorily cleaned, without any rubbing or pushing, the cavity is to be lightly packed with gauze and the superficial antiseptic pad applied.

OX-GALL ENEMA

This excellent injection, so often used after abdominal section, is made thus:

Inspissated ox-gallozs. 2
Glycerinoz. 1
Warm waterozs. 5

To this may be added, when there is need for early escape of gas, one-half ounce of oil of turpentine. It is to be thrown well up into the sigmoid when possible.

RECURRENCE IN CANCER OF BREAST

Formerly it was claimed that any patient who lived more than three years after removal of cancer of the breast should be regarded as cured. But Ransohoff has shown that twenty percent of the cases which passed the three years' limit died of recurrence, and therefore we now put the limit of recurrence at five or seven years. Local recurrence takes place in fifty-eight percent of the cases. Recurrence appears during the first year in sixty-two percent of the cases: principally in the scar or neighboring skin, but after three years this local recurrence is less frequent. Later appearances in remote organs are probably primary can-

cers. In some of the cases with the longest interval before the recurrence there has been no axillary involvement at the time of operation. A possible explanation of the long interval would lie in cell-deposits that have remained dormant, just as retrograde processes are known to follow giant-cell action upon some condition.

A LIVING CHILD IN EXTRAUTERINE PREGNANCY

In ruptured tubal pregnancy, when the woman has passed the fourth or fifth months before the diagnosis is made, if everything seems to be well with both mother and fetus, it is perhaps advisable to permit gestation to progress to full term before operating in order to secure a living child. Besides, the placenta will come away much more readily when at maturity. Many children have been saved in this way and the mother does not suffer any great added danger by the delay. Sittner's careful analysis of all recorded cases showed that the fetus is more or less deformed in about half the cases, though not so seriously as to interfere with viability. The deformities were impression of the skull, facial paralysis, contracture in the elbow, luxation of the hip-joint, or torticollis.

A study of this material and of many hundreds of other cases in which the ectopic fetus died before operation, shows that the sac ruptured in 7.4 percent. The rupture of the sac and separation of the placenta occurred during the later months of the pregnancy in some few cases, but neither so frequently nor with such serious consequences—at least when the patient was under clinical supervision—as to justify disregard of the life of the fetus from fear of these complications. General or local disturbances of a milder nature are extremely frequent with ectopic pregnancy (recurring hemorrhage, pains from dragging of adhesions, displacement of the viscera and peritoneal inflammation). If they exhaust the woman, the fetus should be disregarded and immediate operation performed. In numerous cases the ectopic pregnancy progressed without

any disturbances, and in the majority the disturbances were so mild or bearable that the operation could be postponed out of regard for the child. Some women refuse to believe that their pregnancy is ectopic. The general opinion is in favor of trying to save

two lives instead of one, especially as the sudden catastrophes become comparatively rare after the fifth month and as an aggravation of the condition can be promptly remedied by immediate intervention if the woman is kept under observation.

::: THERAPEUTIC NOTES :::

ANEMONIN

Writing in 1886, Van Renterghem said that although official in the French Codex, pulsatilla had fallen into complete desuetude by reason of the inconstant and dangerous character of its preparations. It is absolutely necessary to employ the active principle if we desire to utilize this plant in therapeutics. Van Renterghem, as was his custom, tried the effects of anemonin on himself, employing Merck's product. A 4-percent alcoholic solution applied to the arm caused vesication in six hours. It is possible that albugo may be cured by the subinflammatory state induced by repeated applications of a watery solution of anemonin to the conjunctiva. It is significant that nearly every author who has found pulsatilla or anemonin useful has administered it in minute doses.

CAFFEINE VALERIANATE

Caffeine valerianate exerts all the physiologic power of caffeine, especially affecting the gastrohepatic function. Paret found that it augmented the digestive powers and the muscular force. Nervous vomiting is readily controlled by it. Laura advises its use in hiccup, especially when this comes on immediately after a meal, adding also strychnine arsenate. Labodie-Lagrange vaunted it in whooping-cough as an antispasmodic, and Laura extended the indication to cover all forms of hyperesthesia and spasm of the respiratory passages, especially in women and children. Legnoux found

that in whooping-cough it diminished the violence of the paroxysms and lessened their frequency. It is a good adjuvant to calx sulphurata. Laura advises 20 to 40 milligrams a day to adults, and more if needed, running the daily dose on occasion up to five grains.

THE SINGLE DRUG

Time and progress do most certainly change the methods of prescribing and dispensing of drugs. The old idea of incorporating in a prescription a drug for every symptom manifest, and some that were not manifest, is obsolete. Monotherapy bids fair to assume its just position, and hereafter in place of prescribing for every symptom, one drug will be given for the whole chain of symptoms. It is obvious how much will be gained by this procedure, for when there is improvement in the patient it will be known to which drug belongs the credit, and *vice versa*.—*Journal of the Kansas Medical Society*.

VARIATIONS IN ERGOT QUALITY

According to *The American Druggist* Kobert proved that ergot collected two or three weeks before the rye is thoroughly ripe is conspicuous by its stronger pharmacologic action. As time goes on this action becomes weaker, and Gruenfeld states that ergot tested four months after it has been collected has considerable less activity than fresh ergot. After eight or nine months the therapeutic action is almost *nil*. The

Russian Pharmacopeia demands that the pharmacist should lay in a stock that will last not more than one year. It also advises that the year's stock should not be ground at once, since it keeps longer and better in its original state. It goes so far as to recommend the making up of ergot preparations as required.

HE DIDN'T SEND TO PARIS

The more a wise man knows, the less he thinks he knows; and this is a good wholesome frame of mind. But—here's the difficulty—he is too apt to think the other man knows all he doesn't; especially if the other is illustrious in public esteem. Here's a case: A good western doctor had a bad patient, so bad that he took him over 1500 miles to the East to consult the biggest specialist "that ever came down the pike." The case was gone over with consummate skill, the diagnosis ferreted out and agreed upon, and then came the treatment. The great specialist leaned forward and said impressively: "The one remedy that will give the best results here is one that unfortunately can not be obtained without sending to Paris. It is"—and here the western man leaned forward expectantly—"the arsenate of strychnine." Our friend cogitated a moment over this remarkable suggestion and then quietly remarked: "I have given more than ten thousand doses of strychnine arsenate a year for the last five years." Tableau!

LEUKOCYTOSIS AND PRIAPISM

One of the most peculiar and striking symptoms of leukemia is the very marked and often prolonged priapism which is sometimes observed. This may last for days—perhaps weeks. Various explanations have been given, though many ascribe it to thrombosis of the corpora cavernosa. Whatever the cause there seems to be some connection between the large increase in the number of leukocytes in this disease and the priapism. The therapeutic suggestion contained in this fact is, the pos-

sibility that any remedy decidedly increasing the number of leukocytes may have an aphrodisiac action. This is certainly borne out by numerous reports which we have received from physicians to the effect that nuclein has acted as a powerful erectile stimulant in cases in which they have used it. It certainly should have a careful trial in every case where such a remedy is indicated. Give it in full doses, preferably by the hypodermic method, and watch the outcome. Can we not have full reports? This is an interesting and very promising field for investigation.

TREATMENT OF AUTOTOXEMIC HEADACHE

When a headache follows an attack of water-brash, it is certainly autotoxemic. The headache may be prevented if at the time the attack occurs the victim at once takes one or two grains of calx iodata. This puts a stop to the water-brash as soon as the medicine touches the stomach. If not taken, the headache may be expected to come on as usual. Even when it does occur the iodized lime is an effective remedy, although the relief is by no means so prompt. When gastric cramps are the result of acidity from fermentation, calx iodata gives prompt relief than do the alkalis.

APPENDICITIS AND RHEUMATISM

In *The Medical Record*, Beverley Robinson contributes a brief note to which we beg leave to call the attention of our good friends who believe there is "no medical treatment for appendicitis." Dr. Robinson quotes Dr. Eustace Smith as saying: "I have seen not one, or two, but many cases of appendicitis, in which the question of operation was being considered, which underwent such rapid improvement under antirheumatic treatment that all idea of surgical interference was quickly set aside. If the treatment fail—that is, if no improvement be noticed within thirty-six hours of taking the first dose of the salicylate (which should be of substantial quantity

and given every three hours), the assumption of a rheumatic origin for the inflammation may be definitely ignored."

It is difficult to see how anybody can ignore such testimony, coming from such a source.

EUROPHEN IN HEMORRHOIDS

"A patient who had been in the hands of four physicians," says Junior, in *Therapeutic Medicine*, "was nearly crazy with continual attempts to replace the hemorrhoids. They formed a tumor as large as a goose-egg. I did not attempt to replace them. I gave a cholagog, applied euophen externally and inserted suppositories of the same. In a few days the pain was gone and in three weeks the hemorrhoids had disappeared. There has been no trouble since. I could recite case after case in which it has brought relief when properly used."

HYPERACID CONDITIONS

The investigations of Dr. Eugene S. Talbot have shown that pyorrhea alveolaris is practically always associated with a condition of general hyperacidity. Dr. Talbot has been able to cure many of these cases by the administration of alkalis, eliminants and proper local applications.

In making these studies he, and others, have demonstrated that many ailments of obscure origin also show this hyperacid state. It apparently is the cause of very many of the common "ailings" of a chronic character and the basis of many serious dyscrasias.

When there is a feeling of dulness, occasional headache, irregularity of the bowels, foul breath, ill-defined pains, general malaise, etc., an examination of the urine will usually show an increased percentage of acid and the presence of indican. If these patients are thoroughly "cleaned out" with calomel and salines and an alkaline and eliminant treatment is instituted, almost invariably rapid improvement will follow. Most effective, in addition to saline purgation and the use of the sulphocarbolates as intestinal antiseptics,

is the use of alkaline remedies like sodium bicarbonate, associated with eliminants like colchicine, juglandin, etc. Such combinations have been found exceedingly effective in the large class of obscure cases roughly described above.

TREATMENT OF EPITHELIOMA WITH EUROPHEN

In *Therapeutic Medicine* for November Junor describes some cases of epithelioma treated with euophen locally. In one the growth had reached the size of an almond in two months. It was on the cheek. The treatment removed it in seventeen days, without the sign of a scar remaining. In the other case the cancer had eaten away over the upper lid of the left eye, involving half the lid. There were two fistulas perforating the lid. The case was one of six years' standing. It took several months to close up the perforation and restore as much tissue as could be restored, some scar remaining. Euophen proved invaluable, for it could be freely used, since it was really preventive of any injury to the eyes and eliminated all pain.

CONVULSIONS DUE TO POISONS

The character of convulsions may afford a fairly accurate judgment of the cause. If the action is on the muscle-substance the effect may consist in increased tonus—veratrine; or in fibrillary twitchings—physostigmine; on the motor ends, fibrillary twitchings—aconitine; on the spinal cord, increased reflexes, abrupt movements, twitching of limbs, coordinated clonic spasms, opisthotonos, adduction of hind legs—strychnine; on the medulla, by picrotoxin, the convulsions are cyclic, first a period of quiet, then sudden convulsions, the animal bucking or turning somersaults, abduction of hind legs, emprosthotonos, reflexes varying with stages of cycle, pupils dilated; on the brain, same as with medulla, but there are no reflexes, no somersaults. On the motor areas—as in epilepsy—the convulsions first involve isolated muscles, then

become incoordinated; on the sensory nerve-endings—due to irritants—there are signs of pain, movements are irregular and designed to remove the irritant.—Sollmann.

THE ACTIVE PRINCIPLES AND TRUE SYNERGISM

Nearly all pharmacologic modifiers exercise over the human economy powers not only different but very frequently antagonistic, as they are administered in very small or in very large doses. Thence spring the interminable disputes, pharmacologic and therapeutic, between physicians in the older school of practice, and the universal accord that reigns among all the practitioners with the active principles. This is due to the employment by all these of the same pharmacotherapeutic unit, of perfect composition and dosage, and always in the minute successive dosage; while on the other hand most of the masters who are unfamiliar with these matters persist, at the cost of many perils, in the use of maximum doses and compound medicaments. But many times of late we note in passing, as justice and truth make a duty, that nu-

merous physicians are experimenting with simple medicaments. The dosimetric school has not, then, preached in a desert and its scientific method is little by little penetrating the public spirit and the conscience of the great masters in all lands.

The simultaneous employment of many agents, even if well defined, with a new one, which is on trial, does not permit of any definite conclusion as to its value. The association of medicaments can only be made properly with well-known remedies, since each develops its proper activity. This is why the simultaneous employment of similar and synergistic—or dissimilar and antagonistic—medicaments, has acquired, thanks to the genius of Burggraave, the value of a grand scientific principle. Putting this truth in practice in the medical art, we find that the association of similar medicines does not limit itself to the addition of the powers of the different agents employed, but that they reinforce the special efficacy of each one of them. The full and complex effect is more lively, more marked, and more prompt, than would be the effect of any one of them in larger doses given alone.—Laura.

::: DIAGNOSTIC NOTES :::

DIAGNOSIS OF ACUTE MILIARY TUBERCULOSIS

In the diagnosis of this disease it is almost impossible to demonstrate the presence of tubercular bacilli in the blood. The various tuberculin diagnostic methods and also culture experiments usually fail to render any aid. However there are several symptoms that are of considerable diagnostic value in these cases. These are dyspnea, polypnea, paroxysmal cough, and cyanosis, combined with a rapid pulse. The digestive symptoms, the large spleen, and the peculiar course of the fever serve to differentiate this disease from typhoid. In tuber-

culosis the pulse will be small and usually soft, and lacking the dicrotic feature. The blood-pressure is lowered and the pulse-rate out of all proportion to the rise in temperature.—A. Ceconi in *Il Policlinico*.

DIFFERENTIAL TEST FOR PUS

Millon's reagent has been used successfully in the differentiation between tuberculous pus and simple pyogenic pus. A small, porcelain evaporating dish is nearly filled with Millon's reagent, and a drop of the pus to be tested is dropped onto the middle of the liquid. Tuberculous pus coagulates to form a firm film; ordinary pus forms a

less tenacious disc. The former can be lifted out on a platinum loop with ease. The latter breaks up when touched by the loop.

After standing ten or fifteen minutes the liquid is colored distinctly red with ordinary pus, whereas with tuberculous pus the color remains unaltered. The drop of pus becomes red in both cases. This difference in behavior is due to the fact that the puriform matter from tuberculous foci is rich in protein substances which are coagulated by Millon's reagent, whereas in ordinary pus the proteolytic ferment of leucocytic origin converts a considerable proportion of the protein into products which do not coagulate but are diffused into the liquid and cause the red color, owing to the presence of aromatic bodies in their molecules. This is a valuable test.

LATENT GONORRHEA IN WOMEN

The following method may sometimes be of value in the diagnosis of latent gonorrhea in the woman. Place the patient in a good light, and identify the region of the orifices of Skene's tubules. Cleanse the locality, and introduce a blunt-pointed probe into the urethra, and make a gentle downward pressure along the sides of its walls. In some cases a drop of pus may be expressed from each tubule, and microscopic examination may now reveal gonococci when they cannot be demonstrated elsewhere.—*The Practitioner*.

ANOTHER SIGNIFICANCE OF CASTS IN THE URINE

Several investigators have reported a frequency of albumin and casts in the urine due to a condition outside of the kidney. They do not necessarily indicate Bright's disease, but are often due to general functional disturbances caused by failure of other organs to perform their duty.

The differential diagnosis between a mild nephritis and a functional disturbance is very difficult, especially when this is due to changes in the composition of the blood or if

due to lesions of the heart or other organs. In these cases a complete uranalysis is necessary, and in many cases it will be found that there is an excessive and acute acidity, amounting at times to even ten times the normal, together with decreasing salts, including urea.—Sondern, *Archives of Pediatrics*.

DRUGS SIMULATING SUGAR IN THE URINE

A number of drugs, when ingested, may cause the urine to reduce Fehling's solution, and respond to some other tests for sugar. They are acetanilid, arsenous, salicylic and dilute hydrocyanic and sulphuric acids, alcohol, amyl nitrite, chloral, chloroform, copaiba, glycerin, mercury, morphine, strychnine, oil of turpentine.—Coleman, in *The Medical Council*.

A NEW TEST FOR BILE IN THE URINE

According to Obermayer and Popper, very small amounts of bile can be detected in the urine by means of a reagent consisting of potassium iodide, 12 Gm., sodium chloride, 75 Gms., 10 percent tincture of iodine, 3½ Cc. 95-percent alcohol, 12½ Cc., and distilled water, 625 Cc. Three or four cubic centimeters of this are placed in a test-tube and 5 Cc. of fresh urine run onto it, so that a sharp contact surface is formed. Highly colored urines must be diluted first. When much bile is present a dark bluish green ring is formed; with less a pure green ring; and with slight traces, a blue ring. This is a simple and at the same time a very scientific test.—*Wien. Klin. Woch.*

A NEW OCCULT BLOOD TEST

Einhorn (*Medical Record*) uses a paper sensitized with benzidin. The paper is dipped in the solution to be examined and a few drops of hydrogen peroxide are added. The presence of blood gives a blue color. This color should appear in a few seconds and if it is not seen within a minute the reaction should be considered negative, as

after that time the color may appear from the presence of other substances. Hydrochloric acid, for example, may cause the reaction after two or three minutes.

This benzidin test is to be recommended as a preliminary test; a strong reaction or no reaction at all gives reliable information.

A TEST FOR THE DIFFERENTIAL DIAGNOSIS OF GASTRIC CARCINOMA

Salomon maintains (*Zeitschr. f. Klinisch. Med.*) that in gastric carcinoma the secretions of the stomach, when tested for albumin and nitrogen, give typical reactions. If the lavage water from the fasting stomach gives a flocculent cloudiness with Esbach's reagent, and if the nitrogen content is about 20 milligrams per 100 Cc., he believes that cancer may be strongly suspected.

Dr. Witte has made a number of clinical investigations of this test which verify Salomon's views. In gastric ulcer, chronic gastritis, and other benign diseases of the stomach the test gives negative results. The presence of blood in the stomach-content does not lead to error if it is not considerable.

THE CUTANEOUS AND OPHTHALMIC TUBERCULIN TEST IN INFANTS UNDER ONE YEAR

Dr. Shaw believes that a working knowledge of clinical and laboratory aids to diagnosis is absolutely necessary to practise medicine conscientiously. An early diagnosis of tuberculosis is especially necessary in young children. The earlier it is made with proper treatment the greater the chances of recovery.

Von Pirquet's characteristic cutaneous reaction after vaccination with tuberculin has definitely established the value of the cutaneous tuberculin test. Wolff-Eisner obtained a reaction on the conjunctiva after instilling a drop of weak tuberculin solution. Both he and Calmette found it constant in tuberculous subjects. However, in a large number of reported cases the cutaneous test in young infants gives no reaction. The author personally used the ophthalmic test

on eighty-one infants under twelve months without reaction. The cutaneous test in the same infants gave a reaction in one case. He concludes that the cutaneous test is simple, without danger, and is preferable to the ophthalmic test, and advises its routine use as a valuable diagnostic measure.

THE USE OF TUBERCULIN IN DIAGNOSIS

Dr. Lord (*Boston Med. and Surg. Jour.*, Sept. 10, 1908) believes that reactions with any one of the three tests, the subcutaneous, cutaneous or conjunctival test, when properly performed, definitely indicate tuberculosis somewhere in the body. Reactions when they occur may indicate the process of latent or inactive as well as active foci. This should be held constantly in mind in applying the results of these tests to individual cases.

In suspected cases of tuberculosis, a positive tuberculin test is only one more factor to be considered in definitely deciding the diagnosis, while an inactive test is of much greater value and goes a long way toward disproving the tuberculous character of the disease in question. Of the three tests the von Pirquet cutaneous test appears to be quite reliable and entirely harmless. It is probably more delicate than the conjunctival and subcutaneous tests, and hence more often responds to latent or inactive foci. Extended experience has demonstrated that there need be absolutely no hesitation in its application.

DIAGNOSIS OF LOCOMOTOR ATAXIA

Probably the earliest and most constant symptom of locomotor ataxia is the presence of an excess of lymphocytes in the cerebrospinal fluid. The actual numbers present should, in all cases, be counted by means of the hemocytometer. The method is simple, being merely that used in the estimation of the leukocytes in blood, except that there is no dilution of the fluid required. According to Emery, the numbers usually range from 50 to 200 per cubic centimeter. —*The Practitioner.*



GLEANINGS *from* FOREIGN FIELDS

TRANSLATED BY E. M. EPSTEIN, M.D.



BILIARY SALTS IN TUBERCULOSIS

This article, which is translated from an article by Dr. George Petit, published in La Dosimetrie, gives a splendid resume of the role of the liver and its secretions in general disease, especially tuberculosis

THE biliary secretions may have a special action, truly antitoxic, neutralizing bacillary toxins with which the organism is impregnated. This new treatment is creating not a little sensation in the therapeutic world, first of all because it rests upon altogether new and original data, and next because the value of its results is attested by facts and proofs multiplying day by day.

The idea which directed the researches of Professors Gerard and Lemoine is "that the liver is the defender of the organism against infections and intoxications." This defensive work it does by elaborating the numerous products of assimilation and by facilitating their elimination, furthermore by holding back the poisons which invade the economy too briskly and so may become the cause of serious troubles, and lastly by secreting the bile whose antiputrid properties are manifest. But there is more: the liver is an organ in which antitoxins are elaborated. The proof of this can be found in the experiment made by Phisalix, in 1897, in which he showed that the bile and the biliary salts effect a chemical neutralization of the venom of vipers, and that cholesterin in particular behaves as an antitoxic agent with respect to this venom.

This experiment, the importance of which escaped the attention of everybody at that time and perhaps even that of the author

of the experiment himself, became the point of departure for the labors of Professors Gerard and Lemoine. They asked themselves whether cholesterin may not have an analogous antitoxic action against the toxins generated by infectious diseases, and tuberculosis especially.

In the first series of experiments with cholesterin they at once obtained results supporting this idea, but they were not constant. They then sought to discover whether it were not possible to isolate from the bile some products allied to cholesterin but more complex and more active. Treating thereupon mixtures of bile with certain solvents in certain ways they succeeded in obtaining preparations perfectly free from biliary pigments, and these preparations they designated, for the same of simplicity, "paratoxin." This paratoxin gave results incomparably more definite and constant than cholesterin alone.

The liver, as was said before, is the seat of a great number of physiologic processes, and these are of prime importance for the general metabolism, such as the phenomena of heat production due to oxidation, regulation of glycemia, formation of urea, transformation of nucleic substances, etc. A great number of these phenomena were referred to diastasic action and were studied as such.

Following the example of Salkowski and his disciples, Schwiengen and Biondi, a

large number of experimenters have established the hydrolysis of albuminous substances of the liver and looked upon it as a diastasic phenomenon.

The bile is said to have to perform a double part. According to some its action is digestive, especially with regard to the fats. Claude Bernard maintained that it acts on the albuminoids, which opinion was invalidated by Corvisart. Some authors thought that the bile retards the passage of assimilable matters in the intestines in such a way as to render their absorption more complete.

And, again, according to others, the bile has only a postdigestive influence. It seems to stimulate, very likely reflexly, the contractions of the muscular layer of the intestine and also to have an antiputrefactive action. This opinion is opposed by Holnikoff, while according to Kuehn it is a mechanical phenomenon.

As soon as the bile reaches the intestine it is decomposed in part. The cholesterin and part of the biliary acids, especially the glycocholic acid the decomposition of which is more difficult, remain unaltered. The greatest part of the bile or of its products of decomposition is, under normal conditions, reabsorbed by the intestine, and most probably, according to Tappeiner's experiments, by the large more than by the small intestine where absorption is very feeble.

This absorption concerns above all the biliary salts, and the quantity eliminated by the feces is very small compared with that secreted by the liver. (Beauris.)

The origin of the cholesterin, first studied by Chevreul, still remains very obscure. Flint derives it from nerve-dissimilation, but this is denied by Beauris and Hoppe-Seyler who have found it in a great number of organs and anatomic elements. Others, again, describe a series of cholesterins, Thudicum for instance citing six different varieties. We find the same complexity in the labors of Bang and of Schulze. It is not merely the formula of cholesterin which is susceptible of undergoing modifications.

Hemolysis is that property which certain substances possess of destroying the blood-

corpuscles. These substances, called hemolytic, are real poisons, which, like the venom of the cobra, liquefy the blood. [The author can only mean "liquefy the solids of the blood."--THE GLEANER.] Here we remember that the labors of Phisalix and Mintz have demonstrated that cholesterin has a neutral antitoxic and neutralizing power over the hemolytic poisons.

Vincent, on his part, has demonstrated the action of the bile upon the poison of tetanus and upon tetanolyisin, which the bile destroys. This action, according to this investigator, is not due to cholesterin alone but also in part to taurocholate and glycocholate of sodium. Salkowski also regards cholesterin as playing a part in the destruction of toxins and hemolytic substances of alimentary origin, while Pibram considers cholesterin an antitoxic substance which accumulates in the blood.

These opinions have been confirmed by the labors of Iscovesco, according to which cholesterin has a protective, anti-hemolytic action against toxic serum. This author thought it possible to employ cholesterin therapeutically in the treatment of human tuberculosis. In the notes of the cases which he communicated to the Biological Society the author emphasizes the advantage of this treatment, which seems to act upon the patient's general condition without any action upon the lesion itself. This is a fact in perfect mathematical agreement with what I have observed in my employment of biliary salts.

Cholesterin administered to lymphatic infants with adenopathy or local tuberculosis has always produced rapid amelioration when given by mouth in form of an emulsion. The dose for an adult is one or two Grams per day.

Of especial importance to be observed is the close relation subsisting between cholesterin and the biliary salts.

Schiff and Lauterbach have been the first to demonstrate that the liver has the property of destroying certain organic poisons. Thus while a dose of nicotine injected into a vein or into the subcutaneous cellular tissue would result in certain death, it will

be without effect or produce only a very slightly marked effect when the nicotine dose is first rubbed up with a bit of liver, the nicotine thereby partly losing its toxic property.

But the important thing is that the bile be physiologic, that is, that it contain its elements in constant proportion, the presence of the bile-salts being the predominant and absolute condition of biliary action.

Moreover, cholesterin is not precipitated in the form of gravel and does not form a calculus except in a bile poor in biliary salts. So it can be well affirmed—and clinical experience is here in accord with physiology—that it is the biliary salts which assure the integrity of the bile function and the equilibrium of that process.

The biliary salts pass through the intestine together with the bile at the time of intestinal digestion, are taken up by the blood and become fixed in the liver by the medium of the circulation or they become regenerated to be again thrown into the bile.

The action of the bile on the intestinal flow is so systematic that an alteration of its composition may give rise to an affection known and described as "*diarrhee prandiale des biliaries*" [prandial diarrhea of the bilious] and of which Dr. Linossier has given a description which agrees with my own personal observation and conclusions. This diarrhea is met with exclusively in persons belonging to the "bilious family." If in the great majority of my patients I see clear symptoms of hepatic calculus it is in such where the closest examination does not allow the affirmation that there is a calculus in the gall-bladder. In all such we notice, on the contrary, signs of habitual cholemia and indubitable symptoms, though at times very slight, of angiocholitis or of chronic angiocholecystitis.

It appeared to me, moreover, that all such persons that I have examined manifested an excessive nervousness. It will be seen further on that this syndrome which I have studied out in fact demands for its realization the intervention of two factors: biliary and nervous. We therefore must endeavor to discover in the hereditary ante-

cedents and personnel of the patient all that which we usually meet with in bilious and nervous families.

The frequency of "prandial diarrhea of the bilious" is quite marked. I have observed ten well-characterized cases in the summer of 1907 in a clientele consisting, in fact, of persons troubled in great part with liver affections. Cases of some slight affection of that kind [*cas frustes*] are infinitely more numerous.

Physiologic research tells us that the gall-bladder begins normally to evacuate some minutes after the introduction of food into the stomach and then continues to do so during the course of digestion. The intestine can react on a sudden and excessive flow of bile, which may cause a flow of liquid for some minutes through the entire length of the intestinal canal.

If this idea of the pathogenesis is correct, then two conditions will be necessary for a "prandial diarrhea" to ensue: (1) a brisk evacuation of the gall-bladder which became extended with an excessive quantity of bile; and (2) an exaggerated reflex sensibility of the gastrointestinal mucous membrane when it comes in contact with the elements of the bile. The second condition is very likely to take place more often in all subjects of nervous temperament, and clinical observation confirms this in effect. The secretion of the bile has to be abundant, and this explains why the "prandial diarrhea" occurs so much the more readily as the time of the preceding meal is further removed and was less copious; it is rare at the evening dinner, it is more frequent at the first morning meal, and still more so at the midday meal when the person had not breakfasted on rising or when his first meal was too light for emptying the gall-bladder.

Dr. Vandeputte of Lille, who devoted himself to the study of the modifications provoked by the biliary salts (paratoxin) in the evolution of pulmonary tuberculosis, presented a communication on this subject to the Therapeutic Society in August, 1908, in which he speaks of sixteen patients who were affected in the first degree and who have

all been improved. "Some of them have retained some symptoms of pulse, temperature, slight cough and physical anomalies. Are they therefore tuberculous yet? The contrary might be claimed, the fever may be produced by many other different causes difficult to ferret out; so the cough and the physical anomalies may be the consequence of some anatomic modifications of the pulmonary parenchyma. Are they definitely cured? We dare not affirm, but our observations show that nine patients have resisted victoriously two or three winters in our regions."

Then the author mentions something which is to be kept well in mind, namely, the manifest action exercised on the number of tubercle bacilli contained in the sputa. "Without admitting that the gravity of a tuberculosis case is in proportion to the number of bacilli in the sputa it is nevertheless certain that grave cases of tuberculosis are accompanied with sputa that are rich in bacilli. We made, therefore, a special study of this question and stained the sputum with Ziehl's liquid and submitted it to count with the assistance of the moveable stage [*la platine mobile*] of a Reichert microscope.

"In most cases the number of bacilli rapidly diminished. I mention especially the case of two patients whose sputa presented ten bacilli in a microscopic field and at the end of three weeks did not present more than one or two. In two other patients the bacilli have completely disappeared at the end of one week. Fearing lest we have here to do with a mere coincident we examined the sputum next day, when the bacilli were again absent. Then the sputum was mixed up thoroughly, made homogenous and then sedimented, and the bacilli continued to be absent.

"It is certain that the number of bacilli must enter only as a second consideration so far as the prognosis of the affection is concerned, yet none the less must we keep account of it and not reject this pathogenic

notion with that culpable negligence as certain authors do.

"In summing up the records of the patients we treated," says Dr. Vandeputte, "we find three of them died, which makes about three percent. In twenty-two patients of the first stage we had one case aggravated and twenty-one ameliorated, among which nine may be considered as cured. In forty-nine patients of the second stage we have five cases aggravated, seven cases stationary and thirty-seven cases ameliorations, among which last six cases remain cured for the last two years. In thirty-one cases of the third state seven patients were hardly under treatment, eight remained stationary, thirteen are ameliorated and among these last four may be considered as cured.

"In deducting from our statistics the seven cases which died and which should not be entered here, we have in ninety-five case the following results: three died, six were aggravated, fifteen stationary, fifty-two ameliorations, and nineteen were cured."—Dr. George Petit, in *La Dosimetrie*, November, 1908.

[To be continued.]

PEDICULOSIS

Dr. Oppenheim, in the *Deutsche Medizinische Wochenschrift*, of Feb. 20, 1908, recommends the following treatment for louse infection: Spray the patient with 90-percent alcohol at a distance of about 10 inches. Then fan the sprayed area till the alcohol has evaporated. Do this twice and in severe cases three times. This method is applicable for body-lice, and will destroy the nits also. In case of complication with itch or favus corrosive sublimate, in the proportion of 3 in 1000, may be added, or also sublimed sulphur [? Ed.]. This method has the advantage over mercurial ointment of promptness, simplicity, not being disagreeable, and costing little.—*La Province Médicale*, 1908, p. 239.



THE TREATMENT OF INFLUENZA WITHOUT ACETANILID

A rational method of treating this disease, including, beside proper dietetic and hygienic measures, the use of only properly indicated remedies, which will conserve, not impair, the patient's strength

By E. W. CAPEN, M. D., Monson, Massachusetts

IN outlining any method or methods for the care and treatment of any patient suffering from influenza or grip, it seems to me that the first thing upon which stress should be laid is to be as sure as possible that it really is influenza which is to be treated. Vague and indefinite symptoms which may mean almost anything are too often attributed to grip by hurried and careless practitioners, or the condition is described to the patient as "grippy" or "a grippy cold." Most of humanity is so constituted that when returning to work after a lay-off enforced by sickness, it gives greater pleasure to be able to report a recovery from "grip" or other prostrating disease than to say "I had a hard cold."

In the milder cases a differentiation is often well-nigh impossible, but a careful examination, coupled with a correct interpretation of the symptoms, seldom leads far astray. For example, I recently knew of a case diagnosed "off hand" and without physical examination as grip. No improvement followed a week's treatment. A physical examination by the new attendant disclosed a peritonitis, proved by operation to be tubercular.

Given then a case that we are satisfied is correctly diagnosed as influenza, what shall we do? In the first place isolation should be enforced. When we consider the extreme danger to the aged or the partially incapacitated of an attack of influenza, it is at once evident that any precaution whatever that will enhance their safety is to be earnestly sought. An upper room, well lighted and ventilated, with double curtains and blinds, with few or no pictures, and with as inoffensive wall-paper as can be obtained, is to be chosen unless other more important considerations decide differently. Accessibility, for instance, if a mother is to act as nurse and do a lot of housework, and care for a family of children as well, is not a negligible factor. A room that can be heated in cold weather to a temperature of 60° to 65° F. is also imperative.

If the patient's temperature exceeds 98.6° F., confinement to bed must follow, and confinement to the room or house in any case. This minimizes the acquiring additional kinds of infection or intensifying present infection and lowering body-resistance, not to mention exposing others. The discharges from the nose or chest or bowels

should at once be disinfected (with some antiseptic other than corrosive sublimate) as a means of limiting the spread of the disease.

The diet should be liquid or semi-solid, easily digestible, nourishing and preferably nonfermenting. A bottled preparation of beef juice, malted milk, white of egg in water or lemon or orangeade, clam bouillon, home-made beef tea, or numberless other things will fulfill these conditions. A liberal allowance of water, cold or hot as desired, should be insisted upon, two quarts *per diem* not being excessive. Rubs with alcohol, alone or diluted with water, add greatly to the comfort of the patient. Strong salt-water makes a good substitute when the expense of alcohol is too great.

Knowing the extremely prostrating nature of the disease, the physician should conserve the patient's strength in every possible way. No unnecessary examinations should be made, but at each visit the heart and lungs should be carefully gone over lest an oncoming complication develop to an uncontrollable extent before discovered. The urine should be examined every second day, especially in elderly people, and careful note should be made of nervous symptoms daily.

Your *intelligent* patients would prefer a day's or two-day's ache if necessary (it isn't) to a year's inefficiency from too much coal-tar. The other kind *you* are to choose for.

In mild cases aconitine is the only remedy needed. It will relieve the restlessness and fever safely and is always controllable.

In moderately severe cases I begin my treatment with gelseminine. This will relieve most of the ache, the fever will be kept within bounds, the nervousness and neuralgic concomitants will be minimized or excluded. If especial respiratory symptoms predominate use bryonia or bryonin, and if any pleuritic pain accompanies strap the chest with adhesive plaster, as if for a fractured rib. Bryonia also, in addition to its effect on the respiratory tract, stimulates the liver, helping to eliminate the toxin and keep the intestinal canal aseptic or even antiseptic.

Eupatorium is given when the bone pains are severe and with it no analgesic is needed. To quicken the effect it may be given in hot water at frequent intervals.

Two of these remedies may be alternated if desired, but never mix two in the same glass or give two kinds at one dose if it can be avoided. Generally it is unnecessary, always it is unscientific, and only one man in ten thousand even thinks he knows what effect or compound is secured by mixing two drugs.

If you see the case early belladonna (or atropine) may be desirable for the catarrhal symptoms. If profuse secretion from the bronchial mucosa be present and it is yellowish and offensive give sanguinarine.

If the symptoms are mostly in the nose and head with a profuse discharge of acrid mucus give arsenic iodide in 1-100 grain doses. Five or ten grains of sodium salicylate three times a day will mitigate the severity of the pain, and of the disease, and keep the bowel in an actively antiseptic condition. That from the natural oil is good; the synthetic worthless or worse.

In special types referable to special organs treatment is as indicated in diseases of those organs caused by other infections. For complicating stomach conditions, hydrastin, strychnine, cinchonidine and so on may be called for. For an engrafted pneumonia consider the specially indicated pneumonia remedies—too long a story for this place.

With the subsidence of most diseases the story ends. Not so with influenza, for here often the story has only begun. Almost invariably is there extreme prostration, and all too commonly is there an aggravation of existing pathological conditions or the starting of a new one. The anemic or nervous condition remaining, when uncomplicated, will require iron in some form. The iron, arsenic and strychnine pill is a good one, and Bland's pills are still at the head of their class. Iron phosphate is also excellent. For the weakness of the heart the fat-free tincture of digitalis, two minims, three times a day is the best. Larger doses excite but do not additionally strengthen the muscle. Bear in mind that this is not

an emergency condition and heroic dosage is uncalled for.

Phosphoric acid, diluted, is the best remedy for the extreme lassitude. For the accessory nervous conditions, so often sequels, the phosphide of zinc is a "comer."

In special cases nerve sedatives may be necessary and then valerian or asafetida will be useful.

A prepared diet list is of great importance at this time. Of the nutritive value and digestibility of various foods many a patient is in the densest ignorance and a few specific directions amount to more than generalizing by the hour.

Finally, if recovery is not complete within a reasonable time a change of climate is to be secured. This presupposes a change of altitude.

PNEUMONIA-SUCCESS: HOW ONE MAN GETS IT

With the advent of winter, pneumonia begins to gather in its victims, and until the balmy days of spring the number of deaths from this cause alone is simply appalling. The percentage in relation to other diseases seems to show no appreciable decrease over that of former years.

Therapeutic nihilism, as taught by Osler, Hughes, Rotch, and some of the stars of lesser magnitude, seems engrafted upon the minds of a majority of our profession so closely that they are content to tread the beaten path and never look for the golden nuggets of truth and hope that lie all about them.

Therapeutic optimism, however, is fast coming to its own among large numbers of physicians who recognize in the active principles and some of the newer remedies "arms of precision" which often may be relied upon to abort or at least greatly to modify this dread disease.

The sudden onset of this disease with its chill, prostration, vomiting, or in children convulsions, and rapidly rising fever, all indicate an acute infection of the system; the cough, rusty sputum and pain soon point to the lung as the seat of invasion.

This is the stage of hyperemia or engorgement and it lasts one or two days.

As this is the time we are first called to see the patient, it is also the time to institute active treatment.

There are three objects to be attained: elimination, disinfection and circulatory equilibrium.

The first may be accomplished by giving the patient calomel and podophyllin, of each 1-6 grain, every hour for six doses and followed by enough of a saline laxative to produce free evacuations. Children readily take aromatic calomel tablets, followed by a saline laxative in lemonade or a good dose of aromatic castor oil.

The second object may be attained by various agents, alone or combined. The combined sulphocarbolates are used by many with excellent results. The salicylates of ammonium and of sodium often are very efficacious in doses of from 8 to 10 grains every two hours.

Very much better than any of these in our experience is creosote carbonate. Of this preparation Sajous says: "Creosote carbonate, administered early, is as nearly a specific in pneumonia as quinine is in malaria, provided sufficiently large doses—10 to 15 grains—be given frequently enough, i. e., every two or three hours. It is in fact the physiological specific of pneumonia, since by depressing the sympathetic center it causes dilation of the arterioles, thus enabling arterial blood to circulate with greater freedom through the diseased area; while by stimulating the test-organ and thus promoting the production of autoantitoxin, it enhances the destruction of the pathogenic germs and their toxins. Creosote carbonate produces no gastric disorders, and although the urine is sometimes rendered smoky it causes no renal or cystic disturbance, even when the above doses are increased two- or three-fold. Crisis is often replaced by lysis. The fever may, in fact, entirely disappear within forty-eight hours or so.

This remedy may be given in capsules, in a solution of glycerin and peppermint water, or in a little hot milk. It should be con-

tinued a few days after fever subsides to avoid recurrence.

Quinine is of very great value in asthenic, alcoholic or obese patients. Doses of 40 to 70 grains, followed in one hour by half the dose; this to be followed by 40 to 50 grains, in case the temperature rises to 101° to 102° F., after reaching normal or sub-normal, should be given. Tincture of iron chloride in 15-minim doses every two to six hours, according to the condition of the pulse, is alternated with the quinine. This method is highly lauded by W. J. Galbraith of Cananea, Mexico, and fully endorsed by several physicians of the same city. In this city the mortality, has been reduced from 75 or 80 percent to 2 percent, and in a series of 30 cases to a mortality of nil.

Guaiaicol is another remedy which has wonderful power over pneumonia. It is used as follows: The skin over the abdomen is thoroughly cleansed by means of soap and warm water and well dried. Then 5 to 30 minims, according to age and condition of the patient, is dropped slowly over this area and rubbed in by the tips of one or two fingers; then the area is covered with a layer of cotton. This is repeated, but not sooner than in twelve hours. Three or four treatments are the average required. A child of one year may receive from 5 to 8 minims.

The third object, circulatory equilibrium, when not attained by the use of some of the agents mentioned, is best attained as follows: Sthenic cases, with full, bounding pulse, are best relieved by giving deferrescent compound granules (aconitine, veratrine and digitalin) every fifteen minutes until some effect on the pulse is noted; then every one-half or one hour, enough to keep it between normal and eighty-five.

A fact recently pointed out by Sajous is the rapid loss of chlorides from the system, owing to restricted diet. This causes a weakening of the defensive powers, and "is a fruitful cause of death in all infections," and to neglect this factor in a febrile case is to compromise the issue." Sodium chloride may be given in the food, in milk, by

enema or hypodermically. This is a factor which should not be overlooked and probably accounts, in part at least, for the wonderful effects of saline-solution hypodermoclysis in case of collapse. For administration by mouth J. B. Todd recommends for an adult 10 grains sodium chloride and 5 grains of potassium bicarbonate dissolved in 8 ounces of water. To this is added a teaspoonful of lemon juice, making a pleasant effervescent beverage. It may be given every two hours.

In asthenic cases adrenalin, 15 minims every two or three hours, often is of value where other stimulants fail. Where duskiness, cyanosis or dyspnea threaten, amyl nitrite followed by nitroglycerin and strychnine arsenate to continue its effect, are indicated.

Where hyperpyrexia threatens and there is not time to wait for the action of our other remedies, wash out the bowel with a large enema of normal salt solution and apply cold to the abdomen by Anderson's method.

High temperature is the cause of heart failure, but this in most cases is prevented by the treatment outlined.

With such an array of powerful remedies in your possession, don't sit idly by, believing Hughes when he says, "There is no remedy which can in any way exert a favorable influence upon the pneumonic process," but get out of the rut, push remedies selected *to effect*, and success awaits you.

J. H. LONG.

East Moline, Ill.

THE TREATMENT OF PNEUMONIA

Every experienced physician realizes the fact that it is of the utmost importance to establish the presence of pneumonia in its early stages, for it is then that treatment is of the greatest benefit and more promising of results. The diagnosis of pneumonia made, one of the first things to engage our attention should be the heart.

We should examine the heart and ascertain whether any mitral or other cardiac disease is present that would contraindicate the use of veratrine and aconitine; if not,

we should give these in combination, in small doses, every twenty minutes for four doses. If there is cardiac weakness or an irregularity, then add digitalin, dosage adjusted, according to the degree of weakness found. Depend on the aconitine and veratrine to soften and slow the pulse, but not wholly to reduce the fever. Add to the foregoing phenacetin, 15 grains every half hour, if needed, in order to reduce the fever.

We need a mucous stimulant, and I have found that, by getting an early start, guaiacol carbonate is unexcelled, given in large doses. I generally combine it with the phenacetin, in 6- to 10-grain doses. It is also a good antiseptic and nonirritating, producing a special effect on the lungs and bronchi not possessed by other mucous stimulants. It also has very little effect upon the heart, leaving this to be controlled by the aconitine, veratrine and digitalin. Quinine may be given in small doses throughout the attack, say 2 grains every two to four hours. The bowels should be kept open with saline laxative.

The phenacetin also has a desirable effect on the pain both in chest and head. But if this does not control the pain, then a mixture of the following may be applied over the chest:

Volatile oil of mustard . . . min. 20
Croton oil, pure min. 10
Menthol, crystals grs. 10
Oil of gaultheria min. 30
Capsicum, powder grs. 40
Petrolatum, enough to make oz. 1

Mix, and keep well covered.

Rub in this ointment thoroughly and cover the area with cotton. [An equivalent, say 5 grains, of the oleoresin of capsicum for the powder seems preferable.—Ed.] There will be very little pain left, after the end of half an hour. However, in severe cases morphine may be given in 1-4-grain doses hypodermically; but this should not be administered indiscriminately, and only as a last resort, for it is this drug no doubt that paralyzes the resistant power of the lung and allows the disease to progress as well as the infection.

If this treatment is carried out as heroically as advocated, then more than 75 percent of the attacks will terminate within twelve hours, provided the treatment is begun within twenty-four hours after the onset; but if not seen until later, then it may take from twenty-four to thirty hours to break it. I can say that with this treatment, as outlined, I have found the death-rate to be extremely low—in fact no deaths in four years.

This takes us to the crisis, when the weight of the blocking up of the blood in the lung compresses the blood-vessels and shuts off the supply of blood, thus rendering the tissues bloodless, yet swollen and heavy—whence gray hepatization.

It is at this stage that the critical period should be looked for, as now the infection produces its devastating ravages. The heart has been overwhelmed and is unable to do much more. The fever drops and there is a general reaction and shock. Now we should withhold the aconite and veratrum, and pay our greatest attention to the heart and respiration. If respiration is laborious, atropine may be given in full doses, repeated in one hour or two, until three or four doses have been given, if necessary, and followed by glonoine, administered every two to four hours or as may seem demanded.

But watch the action of the heart closely, and if any weakness seems to be bearing upon that organ it should be overcome by repeated doses of digitalin, given every fifteen or twenty minutes to one-half hour until it regains strength. I have very seldom encountered in this condition a heart-muscle that needed strychnine for its support.

This treatment should be continued until the critical time has passed, say thirty hours after the crisis; then, if everything is well, it may be suspended and potassium iodide, 10 grains in solution, given after each meal, with the arsenates of iron, quinine and strychnine, or any other good tonic before meals. If the stomach yields to temptation, bismuth subnitrate (Squibb's) may be given occasionally, combined with phenol (or salol) and strychnine, 1-100 grain. If need be, this

can be instituted instead of the tonic before meals and will be found to act well.

Z. G. JONES.

Tongonoxie, Kans.

[We know better than to set up our personal experience as a norm for the rest of you; but there are a few things we firmly believe:

1. Every case of pneumonia is materially benefited by completely clearing the alimentary canal, disinfecting it with the sulphocarbolates and keeping it clear and clean.

2. The fever of pneumonia is best controlled by the use of aconitine, veratrine, etc., and if the bowels have been properly emptied and disinfected, these suffice for the vasomotor indications unless there is hyperpyrexia.

3. This we believe is better met by the cooled bath of Ziemssen than by the administration of any coal-tar antipyretic.

4. Beyond this, we believe, the treatment is strictly symptomatic or variant. From this we may exclude the use of the antibacterial remedies, the sulphides, echinacea and nuclein, still on trial, with much evidence in their favor.

Among the more important variants we may mention codeine for cough, atropine for hemorrhage, emetine for pulmonary hyperemia, and exosmotic enemas to relieve toxemia.—Ed.]

TREATMENT OF PNEUMONIA

The medical profession has certainly run to extremes in the treatment of pneumonia, going from blood letting and blisters, hot poultices and ice-bags, arterial sedatives and heart stimulants, to the do-nothing plan of recent practice. I believe that a large percentage of deaths from this disease is due to unskilful treatment. I believe further that the fault lies in failing to comprehend the pathology of each case.

The practitioner must forget the name of the disease and address himself to the condition of his patient. He should go over his patient carefully in every way, and the

condition of the heart and the lungs should be carefully noted. This knowledge gained the right remedies will suggest themselves to his mind. It is true that the disease runs a fixed course, but it is equally true that the course can be regulated and guided by judicious medication.

It seems that where the leukocytes are abundant the disease ends in recovery. On the other hand, if leukocytes are few an unfavorable termination may be expected. These facts, in my judgment, point toward the proper method of treatment. The increase of leukocytes is a protective process, their purpose being the removal of toxins and irritants from the blood.

The treatment of pneumonia should begin with a few small doses of calomel, followed by a saline purge. If seen in the first stages of the disease, the use of Norwood's tincture of veratrum in two-drop doses every hour, or Fleming's tincture of aconite in the same way until the full effect of the drug is seen, is valuable. When the full effect of the drug is seen then continue it in gradually reduced doses during the stage of acute engorgement and inflammation. If the patient is stout and plethoric blood-letting will give great and permanent relief. Either of these remedies will give satisfactory results by decreasing the force and frequency of the heart and giving the diseased lung a much-needed rest. I have had no experience with the alkaloids of the above suggested remedies, but I can see no reason why they should not be reliable in action and positive in results.

Codeine in 1-4 to 1-2 grain doses is useful in all stages of pneumonia, relieving the pain and cough as well as slowing the respiration and giving rest.

Exceedingly high temperature should be allayed by sponging with cool water, or better with ice-bags applied to the affected side. As soon as the temperature falls to 100° or 101° F. the ice should be removed and again used when the temperature runs up to 103° F.

The treatment of the second stage of pneumonia requires remedies entirely different from those used in the first stage.

The lung is now solid; no air enters the alveoli; the circulation of blood goes on through the lung but under changed conditions and with great difficulty. The heart action becomes feeble and systolic contractions of the heart are weak.

The weak heart must be toned up with good doses of digitalis, and strychnine, ammonia and brandy are now indicated in full and increasing doses. Ammonium iodide is especially indicated. Painting the whole of the affected side with tincture of iodine every few hours for the purpose of stimulating absorption and hastening resolution is good treatment. A Dover's powder at night often does much good. Normal salt solution in large quantities by rectal injection and by needle should now be used. Use it freely—no half measure will do. By its use the number of leukocytes is largely increased and antemortem heart-clot formation prevented.

Complications must be watched for and treated as conditions require.

The treatment of the third stage can only be a continuation of that of the second stage. In double pneumonia where cyanosis is marked the use of oxygen may save life. Delayed resolution should be treated by stimulation of the absorbent system, using iodides, quinine and whisky freely.

Abortive Treatment.—Medical men are divided on the question as to whether pneumonia can be aborted or not. As for myself, I am certain that in the very beginning some cases can be aborted.

In my early practice I was called to see a ten-year-old negro girl. The middle lobe of the right lung was in a stage of congestion and acute inflammation. Crepitation was plain and distinct. Respiration, cough, temperature, in short all symptoms pathognomonic of pneumonia, were present. I prescribed a saline purge, and two-drop doses of Fleming's tincture of aconite were given every two hours and a half.

Ten hours afterward I called again to see this patient, and "Presto!" what a change. No pain, no cough, no crepitation. The mind was clear and the pulse very weak and thready. The patient had fainted

when raised to an erect position. I asked if the patient had taken the medicine regularly. The old auntie who was nursing said:

"Yes, Doctah, I set up and give dat medicine every half hour all night."

Instead of giving medicine every two hours and a half she had given it every half hour. Poisoning from aconite was the result, but the pneumonia was gone. A hypodermic of strychnine and a stiff toddy soon brought my patient around. While I would not advise this heroic method in practice for fear of accident, yet in this case it did abort the pneumonia process. Since seeing the above case I have had many cases aborted by aconite and quinine.

The trouble is that in the great majority of cases the physician is not called until the consolidation has begun, and in most cases the second stage is well advanced. At this time the course is entered, the race between life and death must be run to the very end.

W. SMITH.

Jonesville, La.

CAN PNEUMONIA BE ABORTED?

Amidst these days of bustle and push permit me to draw your attention briefly to the following case: It was last spring, about the 10th of April. I was called to see a little boy living on the outskirts of the town. He was about three years old, strong, robust and of good physique.

The first day on entering the room I found the boy in bed with a temperature of 104° F., with marked dyspnea, and respiration quite shallow and rapid. He also had a short, dry cough; coughing pained him very much. The tongue was heavily furred, there was loss of appetite, the bowels were constipated, and there was an anxious look on his face.

From the above symptoms I was suspicious that this might be a case of lobar pneumonia. By percussion I found there was hyperresonance, due probably to diminished intrapulmonary tension; there was also dulness of the lower lobe of the right lung. Auscultation revealed fine crepitant râles

at the end of inspiration, and bronchial breathing was also noticed.

On the night of this same day I was called again to see the patient, and at this time he had convulsions and delirium, with an increase of two degrees in temperature.

On the first day I was called I gave the patient calomel and podophyllin, 1-6 grain of each every three hours, until the bowels moved freely, then I followed with a dose of magnesium sulphate. Having the alimentary canal all cleaned out and practically clean, I gave orders to give the child one granule each of calomel and podophyllin (as above) every night, and a dose of a saline laxative in the morning. For the fever I had defervescent compound granules dissolved in twenty-four teaspoonfuls of water, with instructions to give a teaspoonful every fifteen minutes until the fever fell and sweating began, then to lengthen the intervals so long as there was no fever, but to increase the dose when fever increased. In addition to the foregoing I ordered the application of linseed-meal poultices with twelve drops of oil of turpentine to each poultice. I continued this treatment with the calomel, podophyllin, defervescent compound and linseed-meal poultices from the first day I was called. On the fourth day the fever and all the worst symptoms were gone.

For diet I kept the patient on some hot sweet milk (this I find an excellent food for the little ones in general, especially in sickness, as it contains all the nutriment they require at that time) and some chicken broth and eggs broken up with some sugar and hot milk.

It needs only to be said that on the seventh day the boy was walking about the house, with just a slight cough.

A. W. THOMAS.

Trenton, Tenn.

[Hundreds of such cases have been reported through the columns of CLINICAL MEDICINE—and yet there are physicians who still cling to the Bevanesque opinion that “there’s no medicinal treatment for pneumonia!” We *know* that an overwhelming majority of cases of this disease

can be saved if proper remedies are administered, “dose enough,” and given in the right way.—ED.]

THE TREATMENT OF COUGH

The older physicians thought to meet the conditions in the treatment of cough by combining as large a number of expectorants as possible. Nowadays we study the cough and endeavor to treat each individual case that comes to us with exactly the remedy which that particular case needs at that particular time. We therefore seek to moderate congestion of the respiratory mucosa and to further secretion by giving emetine, apomorphine or lobeline. If the cough is irritating, out of all proportion to its need as the means of getting rid of sputa, we administer codeine, zinc cyanide or iodoform. If there is not cough enough, however, the sensibility of the mucosa being so deficient that the patient allows secretions to collect to a perilous extent, we stimulate the sensation and make the patient cough harder, by the exhibition of sanguinarine, scillitin or ammonia. If the secretion is profuse, constituting a bronchorrhea, we endeavor to hold it in check by the use of benzoic acid, atropine, or the salts of calcium, while if it is offensive, indicating decomposition, we administer menthol, phenol or creosote. For the febrile movement accompanying it we may employ veratrine, aconitine or gelseminine. As a tonic in the declining stages we usually select quinine hydroferrocyanide or one of the arsenates. For general relaxation of tissue, which hinders the institution or progress of the curative processes, we seek relief through berberine or one of the agents containing this valuable medicament.

General debility accompanying is met by the use of strychnine, or one or more of the tonic arsenates. If the cough is due to infectious disease we moderate this by the use of the sulphides of lime and of arsenic, or of nuclein. When the catarrhal process upon which the cough depends has continued too long and we desire to bring it to an end, we may stimulate the sluggishness of the membrane by sanguinarine or rhus toxicoden-

dron; or, if secretion is very free, use alone or with the preceding arbutin or benzoic acid.

In all cases we employ a single remedy to meet a single indication, there being just enough variation in the members of the groups mentioned to render one more suitable than the other in any particular case.

Altogether we have in the expectorants a most valuable group of remedies, one admirably designed to display the advantages of precise medication; that is, of the exact fitting of remedies to the exact conditions presented in each case. We have not even yet exhausted our list of remedies. For ordinary blood-spitting, hemoptysis, we have recently employed lycopin, which it is claimed exerts a specific contractile influence over the lesser, or pulmonary, circulation. The remedy is on trial, and reports so far have been favorable. If the hemorrhage is serious and demands immediate check, of course we give full doses of atropine, which never fails, unless it is due to an erosion of a large artery from rapidly progressive ulceration. In this case death is inevitable. For the recurrent or habitual epistaxis of children, which after the establishment of puberty, is so apt to be replaced by bronchial hemorrhages, we administer lime salts, continued for months, and carefully prevent the retention of feces in the large bowel.

W. F. WAUGH.

Chicago, Ill.

COUGHS AND COLDS

As "no one is barred," here I come.

Quinine sulphategrs. 30

Acetanilidgrs. 30

Divide into 10 capsules. Directions: One every three hours.

If I have a hobby (and who has not?) it is the foregoing prescription. I write it oftener than any other because it fits more cases here than anything I have ever tried. In this malarial region quinine is always indicated, and the acetanilid has a happy effect in relieving pain, nervousness and spasm. Nearly all coughs and colds are

accompanied by some fever. The acetanilid allays this while the quinine prevents its reappearing. So you have knocked out the three main factors in a cold, namely, nervousness, pain, fever.

If there is (as an accompaniment) auto-intoxication of intestinal origin, I add to the above 10 grains of calomel. You may cry out, "Shot-gun." Yes—but the load is in one package and there is nothing incompatible about it. It costs the patient \$1.25—\$1.00 for me and 25 cents for the druggist—and the great beauty about it to the patient is that this is the sum-total of his doctor and drug bill. And there is no evil after-effect.

If I were inclined to go into the patent-medicine business and wanted to put up a seller, this would be my remedy. If you have not tried it, do so and be convinced. Almost any patient can be induced to take ten capsules. Some attacks require only three or four doses.

I could palaver much and long on this prescription, but it would do no good unless you tried it. Try it, Brother, and if it fails you, then you can write me up in the journal as an ass—but do not fire into me until you have tried it. See?

W. P. HOWLE.

Charleston, Mo.

[Dr. Howle's treatment is good, for his climate. Who else approves it? Who will improve it? How if we substitute the hydrobromide for the sulphate of quinine, as more soluble and sedative? Or phenacetin for acetanilid as less depressing? Would it be as effective then?—ED.]

A PROBLEM IN THERAPY

One of the severest tests of the successful therapist is to be able to stand by a remedy till he gets the desired effect—"to effect," in other words.

"Shall I give something else or shall I continue this remedy till I get the results it ought to give in this condition?"

Upon your answer to this oft-repeated question depends your successful treatment

of disease. However simple it may seem to the theorist, the answer is very difficult in practice.

First, last and all the time, "Have you chosen the right remedy?" This is the most difficult part of the question, and its correct answer will bring into play all the various "ologies" upon which the science of healing is founded together with many bits of wisdom which a man must learn in the hard school of experience.

"When you are sure you are right then go ahead;" but not to victory—yet.

"Have you a reliable preparation of that drug and of definite strength?"

We are compelled to trust this in a great measure to the manufacturer and the pharmacist; and right here, I regret to say, a large element of uncertainty enters into the solution of our problem. Careful observation will show that the physician, with his limited facilities, is doing more, indirectly, to bring about this millennium of therapeutic certainty than the manufacturer and pharmacist and chemist in whom we put our trust and who have at their disposal completely equipped laboratories and immense supplies of drugs in every state of preparation from every part of the world.

Another element in the problem can be solved only by the physician at the bedside: "How much shall I give? when? how?"

The individual characteristics of the patient and his disease enter into consideration here as do also any possible idiosyncrasies, and patient trial and careful observation will aid the physician here more than any theory, "pathy" or "ism."

When the physician's armamentarium consisted of ipecac, calomel and the lancet, with perhaps slight variations these questions were more easily answered—let us hope no one will think they were answered as well then as they are now.

A very ancient practitioner who rode this territory many years ago in a two-wheeled gig treated his patients by the cut-and-try plan, that is, he would cut first and try something else afterwards. It was the same, I think, as the "nonexpectant" plan—neither the patient nor the doctor expects

much. It is related, and well authenticated, that the good old doctor had exhausted his facilities upon one Mr. Quick, with no improvement, and believing that a heart-to-heart talk with the sick man might disclose the flaw in the treatment he said to him one day: "Mr. Quick, I have bled ye, I have physicked ye, and I have puked ye. Now, which do ye think did ye the most good?" "Wal," replied Mr. Quick, "I dunno, but mebbe I felt a leetle mite better after the pukin'."

"I'll puke ye agin," cried the old doctor, in a tone of great relief, sure then that all would be clear sailing ahead. He might have been right—must have been—for Mr. Q. lived many years after.

Now, if you cannot tell whether to push the remedy you are giving or to change it there is something wrong—either with the remedy, or with *you*. Find out which, for, in either case, the solution is in *your* hands.

The appended formula for cough, which has served me well, may interest some of the "family:"

Cough Remedy

Ammonium hypophosphite...	grs. 3
Digitalin	gr. 1-50
Heroin	gr. 1-36
Codeine	gr. 1-12
Veratrine	gr. 1-48

Directions: One such dose every two or three hours.

CHARLES H. GALLACHER.

Slaterville Springs, N. Y.

REPORT OF SOME CASES IN WHICH ATROPINE HAS BEEN USEFUL

Case 1. Mrs. C. P., age 17 years, primipara. Os well dilated, but no expulsive pains—had been given various things by the women in attendance, without result. Atropine, gr. 1-500, was given by me, and in fifteen minutes a labor-pain came. In the course of half an hour a second tablet was given, and pains increased in severity. She received a third tablet, when the occiput rotated under the arch and was speedily delivered. The postpartum contraction was perfect.

Case 2. Mrs. B., age 37 years, 9-para; always had had difficult labors and was nearly exhausted after each birth. When the os was well dilated she received a tablet of atropine, gr. 1-500, and in ten minutes the pains set in. A second tablet was given, when the head reached the arch, and a few minutes later the second stage was completed—duration thirty minutes. Postpartum contractions beyond criticism.

Case 3. Mrs. J., age 26 years, primipara; large muscular woman (wife of a brother physician). The patient was in prime condition for her ordeal. First stage uneventful. This case was complicated with short cord, large fetus and as nearly a dry labor as can well occur, there being just enough amniotic fluid to soil her gown the size of the hand. Her pains were good at the beginning of the second stage, and under ordinary conditions there would have been no indication for stimulation; but understanding what confronted us, she was put upon atropine, 1-500 grain every twenty to thirty minutes, and the pains became very powerful. She was taken from the bed and placed in her husband's lap to give her the advantage of gravity and save, if possible, the necessity for using the forceps, of which the country women stand in mortal fear; and for two long hours I squatted in front of the patient and supported the perineum during the contractions, the most powerful I ever saw.

Something like half an hour after birth she was given the regulation dose of ergot. I doubt its necessity, but fearing a possible relaxation and its consequences it was administered.

Case 4. Mrs. S. B., age 20 years. This was her second child; the first child was still-born from prolonged labor. The patient, a small woman, had been in labor twenty hours when I arrived. The midwife in attendance had given quinine superabundantly.

Examination revealed L. O. A. position, os well dilated, pains severe but without expulsive power, patient nervous and hysterical. A tablet of atropine, gr. 1-500, was given, and in ten minutes the character of

the pains changed and the head began to descend. In half an hour the dose was repeated, whereupon the pains became long and hard. A third tablet, and the head engaged the inferior strait, and in a little over one and one-half hours after the first dose of atropine she was delivered of a 11½-pound boy.

Case 5. Mrs. J. G., aged 18 years, primipara. She is short and slender and comes from a family noted for hard labors. Labor moved on satisfactorily under atropine until the occiput had rotated well under the arch, when the pains failed, and fearing possible internal hemorrhage, 30 minims of fluid extract of ergot was administered with successful issue.

Many more cases of like character could be given to illustrate the oxytocic power of atropine, but this is enough to set other observers at work along the same line. The thing to do is to report its failures and if possible the reason why in these cases it fails to provoke contractions.

Atropine as a Hemostatic

As a hemostatic I have given atropine in a number of cases of menorrhagia and metrorrhagia, with favorable results in each case. I do not know how many times I have used it in those cases as I never thought of keeping a record. One patient approaching the climacteric kept the tablets on hand for use whenever the flow appeared, and generally she needed to take but two, lying down awhile, when she could get up and go about her business. Another always was obliged to keep in bed a week during her periods. I gave her atropine tablets, with the result that she was not obliged to lie down at these times. A third had been sterile for several years from excessive flow. She got well under atropine and will be confined in January with her seventh increase.

I have also employed atropine in hemoptysis, stopping the bleeding in a short time.

Much as I prize atropine in the second stage of labor, I doubt its infallibility. I also want to say that my past experience

with ergot has not borne out the hard and fast rule that it should not be given while the child is yet in utero or in the strait. I remember a case some years ago in which the placenta detached and came down with the fetus, and the head was in the hollow of the sacrum before I discovered the accident. To say that I was scared is to put it mildly.

The pains were miserably inefficient and I was face to face with death from internal hemorrhage. I flew to my forceps, and, without paying any attention to asepsis or antisepsis, adjusted them as quickly as possible, but the miserable things would slip around that placenta and slip off every time I pulled.

At last common sense came to my rescue and I gave two teaspoonfuls of fluid extract of ergot, which set up violent contractions that forced the child ahead of the placenta and he was safely delivered. The mother made an uneventful recovery.

Since that time I pay no attention to hard-and-fast rules when the emergency calls for their violation. I did not then know the value of atropine and don't know that I could use it in such a case now that I do know it, but probably would do so, but would have my ergot bottle handy because it helped before. We may as well make up our minds that there are no hard-and-fast rules in the practice of medicine.

M. B. TULLER.

Crawford, Ky.

[Here is another report for which we have only commendation. It seems as if the real doctor is not yet quite extinct.—ED.]

ANOTHER SEXUAL ABNORMALITY

I notice in your December (1908) number a communication from a reader in Siam, on "Abnormality of the Sexual Organs." From his description the case seems exactly like the one I had about twelve years ago. My subject was 35 years of age, American, 5 feet 8 inches tall, weighed 165 pounds, dark complexion, and subject to periods of nervous depression. Her breasts were well

developed, mons covered with an abundant growth of hair, external genitals perfectly formed, vagina about two inches deep, and ending in a cul-de-sac, with no evidence whatever of a cervix. With the assistance of a colleague she was chloroformed, but we could not find the slightest evidence of uterus or ovaries, not even rudimentary ones. She had been married for a number of years, and her husband stated that she had very marked sexual desire.

J. BURTON ARMSTRONG.

Beaver, Pa.

OUR NEW COVER

This month CLINICAL MEDICINE comes out with a new cover. This is to be our regular "dress" for 1909, except that we are planning to change the color combination from month to month as the seasons change. We want you particularly to observe this monthly gradation. The icy-blue of the February cover is suggestive of winter's cold and snow. As the season advances we shall use varying shades of green, lighter in April and May, darker in June and July, shading off in the fall to brown, suggestive of autumn leaves, and back again in the winter months to the whites and blues of winter's snow.

The words "right," "exact" and "true" are suggestive of CLINIC teachings and of our alkaloidal propaganda for a *truer* therapy through the advancement of *exact* medication. These teachings are *right* because they are logically sound.

We hope that you will like the new cover, and that the whole journal, "from cover to cover," may be an inspiration to you.

NEVADA?

Please publish a statement from me that doctors should stay away from Nevada. This state is overrun by doctors now and especially Fallon, headquarters of the Truckee-Carson Irrigation Project.

Fallon and surrounding country, with a voting population of 511 last election—two-thirds of whom are single men—has

nine practising physicians and three drug-stores. The entire population to be served is but little over 2000 people.

The literature sent out by the Reclamation Service gives the impression that the town of Fallon is growing rapidly, but as a matter of fact there are less people here than one year ago and about twenty-five empty houses. Almost weekly some physician comes from the east at an expense of from \$200 up to examine into the possibilities here, and when he finds the place overrun by doctors goes back a sadder but a wiser man.

This communication is written to CLINICAL MEDICINE in the hope that it will save money for those physicians who have read of the glowing prospects of this region. All avenues of business are overcrowded, except as regards farming. We need farmers with upwards of \$2000.

JOHN E. WORDEN.

Fallon, Nevada.

"JOIN A GUN CLUB"

I read the other day, in an old number of your journal, an article entitled, "Join a Gun Club." Permit me to say that the article is a good one and that it contains admirable advice. But one objection should not be overlooked, which is, that the rather severe hammering from the heavy trap-loads, together with the incessant racket, will tend to shake one's nerves up, and that I personally should hesitate to undergo a delicate operation at the hands of a surgeon who had within forty-eight hours attended a trap-shoot.

Now for my own hobby. I think you state that very few can go into the wilderness and care for themselves with sufficient expertness to insure comfort and health. (I use "expertness" in its common sense.) I think this depends entirely upon what kind of man you have to deal with. I realize to the full that we have lost acuity of sense and the feeling of kinship with the forest-folk, and that we have progressed very far beyond our forebears, even those of the generations immediately preceding ours;

but, providing that there still remains to a man the love of the natural, the ability to care for himself in the woods is easily within his grasp.

Permit me to offer to your consideration the admirable little book, "Woodcraft," by a gentleman named George W. Sears at his birth, and "Nessmuk" (Wood Dove), by the Indians, whom he often visited. If there is remaining to you a spark of the spirit that animated our ancestors, you cannot fail to enjoy the book. It is not a record of killings, but a chatty little volume of wisdom; discursive, rambling, but (to me) infinitely charming. With this little book, a man without any experience whatever can "take to the tall timber" with the certainty that he will be warm, well-fed and comfortable. The things he recommends would make an excellent prescription for many cases which will doubtless recur to you.

I realize that I am a crank, and that I am, to put it very mildly, a rather bold individual to advise an association of physicians concerning the care of the body; but let my excuse be that I wish everyone whom I can in any way reach, and in any degree influence, to be benefited as I have been.

Every autumn I take my wife and my camp-kit into the wilds, and for two weeks we enjoy a one-ness with the primitive which perhaps none can understand, save those of similar tastes. We live in a tent, we eat out-of-doors, we canoe, we hunt, and we sleep. We sleep nine and ten hours a night, and we eat without fear anything that we desire. As for nerves—oh, fudge! The strain of business is forgotten, and muscular exercise takes the place of mental gymnastics. It may be that you know what a sedentary occupation is; I hope not. But, if you do, you will readily perceive that with the complete change of occupation, and the absolute rest which the nervous system gets, all the bodily functions must needs be improved in strength, especially when you consider that a man chops his own wood, lugs his own food, and plays attentive nurse generally.

I am an expert at it all, since my inclinations have always preserved the interest

without which we learn but slowly. I have had much practice in the art of camping and hunting, and perhaps I am, therefore, optimistic; but though one constantly learns new "wrinkles," I say that a man who is possessed of the usual complement of hands, feet and head can go into the woods with the assurance that he will not suffer, but that, on the contrary, he will come out a healthier, wiser and broader man than he went in.

I came very near being a physician—as near as John did to kissing the "hired gal:" he asked her, and she said "No." I had not the necessary health to undergo the strain of working my way through college and medical school; perhaps it's just as well for humanity. I have some small knowledge of the human machine, and, taking it "by and large," as we of New England say, I have much reverence for the motives which actuate the great majority of the medical profession; which, as I am a layman, I will put into colloquial form: "Boost!"

To get down to personals. I am troubled somewhat with valvular lesions of the heart, the result of two pretty severe attacks of inflammatory rheumatism; I presume the confining nature of my occupation is not particularly good for it; but I am in the habit of tramping in the woods whenever I get an opportunity, and I play wood-wind instruments; these things have proved so beneficial that physicians have been surprised at my chest development. Whether or not the exercise is also of benefit to my heart, I am not sufficiently conversant with the subject to judge. But this I will state: I have yet to see the man who can out-walk me in the woods. I took an athletic, robust man into the woods with me last September, and I wore him to a "frazzle," so that he was forced to call a halt, to rest! And sciatica is not the best thing in the world for a leg.

Tell your fellow-practicians to learn to shoot and fish; make your patients do so. Of course, you will select your cases; to send to the woods a man who is wholly artificial would be simply consigning him

to torture. But, if such a man has money, and can hire guides to do everything but breathe, he will derive some benefit from the wilds. I write particularly for the benefit of the man who cannot pay extravagantly for his outing.

And as for the remaining aspect of the matter, one lying on a "couch of new-pulled hemlock," breathing the balsam of the pines as Nature herself distills it, will find that in the wild places only may one find the personal handiwork and presence of the Author of our being—who gave us our bodies for perfect instruments with which to work our will.

Please pardon the presumption I have exhibited in sending to you this rambling letter. But make its thought your own. Too many of us are feverish in our souls; too many are yearly being consumed by the fever of commercialism it will pay to take a day off now and then not necessarily in the heart of the wilderness, but within reach of civilization, if you choose. But—get back to the earth, else you will get back to earth indeed.

If I can help any patient of yours or of your friends, I shall be only too glad to do so; for thus I can be of use.

Anyway, send for the book I spoke of, I urgently beg. You will find it at least entertaining, and, I truly believe, most valuable. Forest and Stream Publishing Company, New York, furnish it, at the price of one dollar.

E. M. CLOUGH.

Biddeford, Me.

[A splendid letter, breathing the true earth-loving spirit and imbued with the longing for primitive nature which leads men back into the wilderness—if they are fortunate enough to command time, money and congenial companionship. The editor, as one reader of Mr. Clough's letter, will secure a copy of Mr. Sears' little book on "Woodcraft." The spirit to try the wilderness-life is crying out within him; but given those necessities just mentioned, the problem is: Where shall he go? He will appreciate suggestions from those knowing the ideal

spot where all the pleasures which Mr. Clough depicts can be obtained.—ED.]

DR. LAKE MAKES REPLY

I am coming right back again on the case of Mrs. J. F., which I reported and which was published in the December number on page 1618.

First I want to thank you for your free discussion of it. Such talk as that does one good.

I may have bunched things too much in an effort at brevity; but when first called to see her the complaint was simply regarding the load of flesh which she was obliged to carry about with her, and of flatulence and pyrosis. She said her bowels moved freely twice a day, and that she was a very hearty eater. It was at this stage of the game that I prescribed the "obesity" combination, and, in fact, before the symptoms of excretory suppression developed I had reduced her abdominal measure seven inches by this treatment, with the regimen which should always accompany it.

As to heart stimulants, apocynin is highly recommended by some, and has been of great service to me in several cases of this kind. Cactin was also used. Digitalin I am more or less afraid of in plethoric cases with a full, strong pulse. I believe that more patients are accidentally killed by this drug than by any other, though it is invaluable where rightly used.

As to hepatic stimulants, how about calomel? Elaterin and jalapin were unfortunately not in my armamentarium at the time, and not obtainable here. I ordered some at once but they arrived too late, so I used powdered jalap—but even that and large doses of calomel failed to produce any effect after the one free stool.

Elimination and intestinal antiseptics were used in the beginning, as stated in my report, and their use was continued throughout.

I am a therapeutic optimist and I am not timid about giving drugs "to effect," but the effect produced in this case was like that when one tries to make a water-soaked

log float. The medicine administered seemed to disappear into that mountain of flesh as if poured upon the ground. The soggy muscular tissues, the relaxed vascular walls, the toxin-laden nerve- and brain-cells failed to respond to the most active stimulation. She sank and died.

Again I thank you for your comments and I hope some of the brethren will honor my report by discussing it.

The charcoal-habit patient is improving by the use of will-power and compound hypophosphites, though the craving is still present.

GEO. B. LAKE.

Wolcottville, Ind.

ACETYLENE AS AN ILLUMINANT IN LABORATORY WORK

Many practitioners, especially those living in the smaller towns and villages, have difficulty in securing good illumination in their office work, and thus, unfortunately, important diagnostic procedures are often omitted because of this inconvenience.

The advantages of acetylene as an illuminant in diagnostic work for the general practitioner and the specialist, and particularly those doing nose, throat and ear work, gynecology and orificial surgery, have already been fully discussed elsewhere and are too well known to require further comment here. But so far as I can ascertain from looking through the literature on this subject, the only discussion on acetylene illumination in scientific laboratory work is an article by Dr. Harvey W. Wiley, entitled "A Note on the Use of Acetylene Gas as an Illuminant in Polariscope Work," and published in *The Journal of The American Chemical Society*, February, 1896.

In acetylene we have what appears to me to be an excellent and convenient means of obtaining a satisfactory light for microscopic work. The light from a small burner—and I have used an ordinary bicycle lamp with very good results—gives satisfaction, permitting, as it does, of the use of the highest magnification with very clear and distinct fields. The light seems

to be much less tiring to the eyes than any other artificial light, a fact that will be especially noted in long-continued microscopic work, such as the enumeration of several hundred leukocytes in differential blood diagnosis, etc. This in all probability is due to the great similarity between acetylene light and daylight.

Hitherto the extended use of acetylene illumination has been confined to those localities where there is no supply of ordinary illuminating gas or electric light; but the investigator will soon prove to his satisfaction that a small acetylene lamp will soon well repay its owner the slight expense incurred by its installation, and that its light will compare favorably with that from other sources. In addition, its convenience, portability and high illuminating power will add materially to its value.

Another wide field for acetylene illumination in the laboratory is being opened up by the introduction of the "dark-field illumination apparatus" which is now coming into prominence as an effective aid to the study of living microorganisms and microscopic cells without the hitherto essential methods of fixing and staining. The use of this attachment necessitates a very bright illumination, the makers advocating the electric arc or possibly one of the more recent high-power electric globes (e. g., the Nernst, the tungsten, etc.). This form of illumination then necessitates not only electric connections but additional special fixtures which add very materially to the first cost of the outfit, in the case of the arc-lamp, a very considerable item.

To replace the foregoing I would suggest a small acetylene lamp-generator combination which will give good service and offering the following advantages:

1. Portability and possibility to use anywhere without recourse to electric fixtures.
2. Much lower first cost and minimal cost of upkeep.
3. High-power light of excellent quality causing but a minimum of eye-strain.

One great advantage of this form of illumination is the fact that it is within the reach of any physician, no matter where he

may be—whether in the city with all its conveniences or at the lonely country cross-roads. The same lamp may be arranged for use in physical diagnostic work as well as in the laboratory, while its use and the advantages it brings will be attended with the success that always accompanies the man who does thorough work.

HENRY R. HARROWER.

Chicago, Ill.

TWO CASES OF ASTHMA

It has been my desire for some time to tell you of my experience with bronchial asthma, but I have been waiting for further developments in two cases before giving conclusions. My conception of the causes and pathological conditions present are about as follows:

1. An hereditary factor; in both of my cases there is a history of asthma in parents, brothers, sisters and children.
2. A run-down condition or diminished vitality caused by overwork, worry or disease.

3. Imperfect elimination by kidneys, bowels and skin.

Pathology and associated changes:

1. An acute dilation of the blood-vessels around the bronchi and bronchioles, causing:
2. An acute closure of the bronchi and bronchioles.

3. An exudate of thick, tenacious mucus.

Both cases have shown also a disturbed circulation, with either a weak and rapid or dicrotic pulse; in both cases the liver is somewhat enlarged and tender on pressure; both have considerable pain in the region of the diaphragm, greatly augmented during the paroxysms. The respiratory symptoms of both are typical of bronchial asthma.

I have obtained the best results by treating these cases as follows: For the paroxysms, the combination of strychnine, hyoscyamine, lobelin and apomorphine, as found in the well-known antiasthmatic granules, I have found ideal if the patient can wait a few minutes for relief. Hypodermically, where necessary, I use a combination of strychnine, hyoscyamine and

glonoin, and get very good results. Occasionally it has been necessary to empty an overloaded stomach with powdered ipecac or lobelin, depending on the condition of the patient. After the paroxysm is controlled I thoroughly cleanse the bowels and increase the urinary flow by copious draughts of an effervescent magnesium sulphate. At first I followed this with full doses of strychnine combined with cactus, day in and day out, and although the frequency of severe paroxysms was lessened there was no permanent improvement, the longest interval being two weeks.

Lately I have decided that if the blood-vessels could be toned more than with the strychnine alone, it would be better, so I began giving one tablet of suprarenal extract three times a day. Also, to increase the red cells and the oxygen-carrying power of the blood, I gave iron and nuclein; so I changed from strychnine alone to the arsenates of iron, quinine and strychnine with nuclein, every three hours.

To one patient who was very nervous and who had suffered from one attack of nervous prostration I added lecithin with still better results. This case is of two years' standing, the paroxysms becoming more and more severe up to a year ago, when I instituted the clean-up and strychnine treatment, and then it bettered somewhat. Eight weeks ago I started the treatment as outlined, and marked improvement followed, but after a week the patient failed to renew the suprarenal tablets and in a few days he had another mild attack. Since then she has taken the full treatment of the arsenates with nuclein, suprarenals and lecithin, and for six weeks has had no paroxysm—the longest period since January.

Case 2, who has been having two or three mild paroxysms a day, has been under my care only three weeks, but has been free from paroxysms for over two weeks—under suprarenal and triple arsenates with nuclein without the lecithin. The excretions of both patients are carefully watched.

Before closing I wish to say that I have tried atropine, agrimony, grindelia, potassium iodide, calx iodata, and thyroid extract

without any marked results in lessening the paroxysms. I will report again on these cases.

WM. H. VEENBOER.

Grand Rapids, Mich.

[We have read with great interest Dr. Veenboer's conclusions as to the conditions present in his two cases of bronchial asthma. His conception seems to us correct and we shall await with great interest the further results of his treatment.—Ed.]

ASTHMA: ITS TREATMENT AND MANAGEMENT

In reading Dr. Price's offer in the January number of *CLINICAL MEDICINE*, I am going to try to outline my plan of treatment for asthma and "let in" any more of the CLINIC "family" who are desirous of owning that pretty black mare. For who can say better than a doctor what pleasure there is in owning the prettiest and fastest horse in any country. The stake is the mare—the goal is any man who can suggest a cure for Dr. Price's asthma. I shall await the result of my treatment with a great deal of interest.

Asthma is a nervous reflex disease, generally symptomatic, from some disordered or diseased part of the human body, causing spasmodic or short and labored breathing. You cannot treat all cases alike. Every case is a law unto itself. I will cite two cases that show its different manifestations.

Case 1. M. H., age 80 years, has had asthmatic attacks for forty years. She has had to sleep in a chair many a night, unable to lie down, as severe coughing and labored breathing would follow. There is no use going any further with the history of the case, as you all know the classical symptoms of this disease. An examination showed an elongated uvula, swollen and inflamed, that kept up a constant irritation; also enlarged turbinates in both nostrils.

Treatment: The uvula was amputated close up to the base, the turbinates were cauterized, and the nose and throat sprayed with Seiler's solution. I "cleaned out and

cleaned up" with calomel, gr. 1-4, as necessary, followed by the intestinal antiseptics until stools were normal. I then placed him on the brown iodide (calx iodata), and filled him up with it. Give enough and keep it up and you won't have asthma.

If at any time the patient feels "stuffed up" after recovery, or has any premonitory symptoms of a return, direct him to begin to take "the little gray pill," calx iodata, every half hour for four or five doses, then every two hours for twenty-four hours, and you will be surprised to hear your patient say: "Doctor, your pills are wonders."

Case 2. J. C., had asthma for ten years. Elongated uvula, no enlarged turbinates, general debility, chronic constipation; blood count: hemoglobin 60 percent, increased leukocytosis.

Treatment: Cleaned out and cleaned up the alimentary canal as before. I gave the arsenates of iron, quinine and strychnine with nuclein four times a day and had the patient sleep on the front porch, which had been screened in, until hemoglobin showed 110. He began to improve but still "wheezed" a bit. I gave him the iodized calcium (calx iodata) to effect, and there was complete recovery. This patient keeps those "little gray pills" always by his side, although he has not had any use for them the past year.

To summarize:

1. Diagnose your case thoroughly, remembering that asthma has as many ways of manifesting itself as there are days in the year.
2. Clean out and clean up—"sure."
3. Build up your worn-out cells and overcome anything that may cause symptomatic reflexes, such as nasal stenosis from any cause, constipation, enlarged tonsils, elongated uvula or "appendicitis." (I secured complete recovery in a case of asthma that was secondary to recurrent attacks of appendicitis by the removal of the offending organ. I did not operate primarily for the asthma and was surprised to hear I had completely cured his asthma as well as his attacks of appendicitis, although his asth-

matic seizures were always worse at the time of the attacks of appendicitis.)

4. Calx iodata, repeated as often as necessary to effect.

This is just as simple and effective a form of treatment as can be imagined, as the treatment of many diseases has become since the advantages of the active principles have been taught us by Dr. Abbott. God bless him! May this be a happy and prosperous year for CLINICAL MEDICINE, and see many converts to this grandest of all therapeutic discoveries.

HARRY W. SIGWORTH.

Waterloo, Ia.

[If Dr. Sigworth's letter does Dr. Price half as much good as it already has done us, there is not the slightest question about his being cured of his asthma!—Ed.]

FOR DR. PRICE'S ASTHMA

In answer to Dr. Price of Mosheim, Tenn., I would suggest the following treatment for him to break up the attacks: Let him take, as an antiasthmatic combination, suitable doses of strychnine arsenate, hyoscyamine, lobelin and apomorphine, and, if needed, glonoin every fifteen minutes until relieved; then for curative effect let him take the brown iodide of lime, with small doses of amorphous hyoscyamine, arsenous acid, and strychnine arsenate. They are most conveniently used in tablet or granule form. Put all into a capsule and take the above dose every two hours until cured. He should continue the medicine for at least six or eight weeks.

W. F. RADUE.

Union Hill, N. J.

ASTHMA

It has been my lot to treat some bad cases of this affection, cases of many years' standing resisting all previous treatment. I have met with success in arresting the trouble in some cases; in others the symptoms would recur after a period. In one of these cases, lately under observation, I

believe the attack was brought on by the dense smoke in the air from the forest fires up North. The treatment held the symptoms in check until the air was cleared by a rain, when there was no more trouble. I used the following: Potassium bichromate, gr. 1; heroin hydrochloride, grs. 4; magnesium sulphate, grs. 30; oil sassafras, gtt. 5; water, to make ozs. 4. One teaspoonful every one-half hour until relieved.

Three doses generally were used and patients would get relief and go to sleep. In twenty-four hours would have to repeat.

GEO. ROBERTS.

Lincoln, Va.

WHERE THE PROOFREADER "GETS HER'N"

A number of unfortunate errors crept (we like that word "crept"—it is so insinuatingly and vaguely explanatory) into the January number of *CLINICAL MEDICINE*. The complainants, following the usual pleasant custom, shunt the responsibility for the mistakes upon the proofreader, one sarcastic commentator hinting at a "holiday jag." Our lady proofreader is righteously indignant and suggests that if some of these literary lights wouldn't write so like the—her remarks were perfectly ladylike!—there wouldn't be any mistakes.

Dr. A. K. Warner says of his article on "Strength and Weakness," page 106: "There were three gross errors. First, you changed an 'it' into an 'I' in the fourth line from the top of the second column, which rendered that sentence unintelligible. Second, you changed 'comparative chances' into 'conjunctive classes.' Third, you altered 'abortion therapy' into 'abortive therapy.'"

Our apologies are due to Dr. Warner. We certainly did not intend to make any "changes" which in the slightest could alter the meaning of his article. If any such changes were made it was due to some slight difficulty in deciphering his handwriting; the editor desires to absolve the proofreader.

Dr. A. Rose, of New York, says concerning his article on page 108:

"Kindly permit me to correct a printer's error in the footnote to my article 'The First Nosocomeia.' It should read 'nosocomia' instead of 'nosocomeia,' The latter word which appears in the title is the plural of nosocomeion while nosocomia means the care given to the sick."

Again we apologize.

BURNS AND SCALDS

On page 1606 of the December number of *CLINICAL MEDICINE* is an article by Dr. Stein regarding the recommendation of carbolic acid for burns. Carbolic acid has been found efficacious in chilblains, and may be equally beneficial in burns. I have never tried it and cannot speak from experience. However, there is a remedy I consider far superior to this or any other remedy I have ever tried, and it is neither dangerous nor injurious. That remedy is the chloride of potassium. A lotion for local application is made with one or two grains of the salt to four ounces of distilled or boiled water. Apply freely by means of soft cloths saturated with the solution and then wrap in absorbent cotton or lint and lightly bandage. (Never apply absorbent cotton directly to the burn.) This remedy soothes the pain quickly and subdues the inflammation. The cloths should be rewetted with the lotion as soon as they become partly dry, without removing them; then recover with cotton bandage or oiled silk. If potassium chloride cannot be obtained use the chlorate. [But there is absolutely no identity, therapeutically—ED.]

Many of the remedies recommended for burns are more harmful than beneficial, as, for example, linseed oil and lime-water—the so-called carron oil. Picric acid has been recommended as very beneficial, but I doubt if it is any better or as good as the chloride of potassium, to say nothing of its stain. No insoluble powder should ever be applied directly to a fresh burn or scald.

If desired, a little *pure* glycerin can be added to the chloride solution—one ounce of glycerin and three ounces of water with one or two grains of the salt.

The potassium chloride should also be given internally. Put one teaspoonful of the foregoing solution in half a tumblerful of water and give a teaspoonful every half hour for a few doses, then every hour. In the first stage of acute inflammation and fever aconitine or ferrum phosphate 3x should be alternated with the potassium chloride. Should there be depression or collapse potassium phosphate 3x should be used instead of the sedative, and in the same way, until reaction is fully established. If suppuration follows or has already taken place when first seen, calcium sulphide 3x will be required in alternation with potassium chloride, or, possibly, sodium phosphate, in the same strength locally and internally. Should the patient be diabetic, sodium sulphate should be used instead of potassium chloride, both locally and internally and in the same dose.

Other complications will have to be met with indicated remedies. In the majority of cases of scalds and burns potassium chloride, locally and internally, will be the only remedy needed for a complete cure. If possible, avoid breaking the blisters, as the serum acts as a protective and the healing is more rapid.

E. H. HOLBROOK.

Baltimore, Md.

[In my experience the blisters should be punctured at the base to let out the bulk of serum and so prevent rupturing and possible infection.—Ed.]

THE LAY PRESS AND THE DOCTOR

As a striking illustration of the power of the lay press for evil as well as for good, we may cite the following incident, which has recently come to our attention with a peculiarly strong appeal because we know the doctor who is the sufferer in this case, and know him to be a clean, square, upright man.

Dr. O. E. Wald, formerly surgeon-in-chief of the Lake View Hospital, Chicago, a little more than a year ago was so unfortunate as to lose a patient during an

operation upon tubercular glands of the neck. The Chicago newspapers printed a sensational story about this unfortunate death, which was prominently displayed in nearly every Chicago daily. Like most newspaper stories, this one was essentially untrue and unfair, but how was the public to know this? As a result of this cruel libel Dr. Wald's splendid practice, built up by the hardest kind of most efficient work, was practically wiped off the slate in a few weeks. At the coroner's inquest, held only a few weeks later, the Doctor was completely exonerated from all blame, and it was conclusively shown that he had used all due care and caution in the operation upon this unfortunate girl and was entirely free from any fault or responsibility.

But meantime his practice was ruined. We now understand that he has commenced suit against several Chicago daily papers. The Doctor expects to recover large damages, and it is hoped that he may do so, for it is time that some curb be placed upon this reckless appeal to the sensational which never stops to weigh consequences and has no respect for truth, right and character.

THE TRUTH ABOUT THE ELECTROLYTIC RECTIFIER

How to change the alternating current to a direct current without the agency of a motor generator has interested scientists for years. Mechanical contrivances have solved the problem partly, but even here the initial cost and subsequent maintenance is considerable. More than ten years ago it was found that a plate of aluminum with a plate of carbon, if inserted in a solution of sulphuric acid, the aluminum used as the positive electrode would resist the flow of current up to 25 volts. Graetz, a German scientist, showed how a combination of four such valves could be made to rectify a single-phase alternating current completely.

Fig. 1 shows the connections and the direction taken by the alternate current impulses. By using proper chemicals and elements, alternating currents up to 140 volts

pressure may be rectified by this method. The resulting direct current is not as smooth as from a series of batteries and has a weak undulation, but is absolutely free from any negative polarity. Five years ago a prominent doctor who is well versed in electrotherapy and who, residing in an alternating-current district, had to use batteries with his wall-plates, suggested that I furnish him with a small rectifier to supplant his batteries which were continuously out of order. This, the first rectifier to replace batteries and use 115-volt alternating current in connection with a galvanic wall-plate, is still in use today. The doctor was so pleased with his apparatus that he told his medical associates, and without any advertising to speak of the demand grew. About a year ago I made an improvement, by adding a fifth cell to the four, the function of which is to absorb the undulations and deliver a very smooth current. On this improvement patents are pending.

In the December issue of *CLINICAL MEDICINE* there appeared an editorial note, which states, "We are sorry to say that these chemical rectifiers do not do what the manufacturers claim for them." A primary faradic current deserves to be called a direct or galvanic current, just as much as the current delivered by these rectifiers." Believing myself and the firm I represent to be pioneers in introducing the chemical rectifier to the medical profession for the purpose aforesaid, I take exception to this statement, which is not borne out by the actual facts, and refer the readers to Fig. 1.

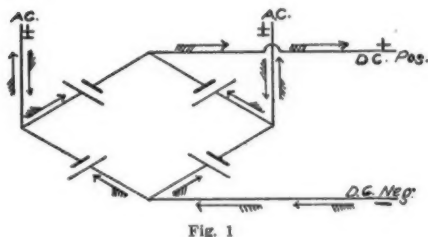


Fig. 1

This shows plainly that the alternating current is entirely rectified, and in no wise similar to a primary faradic current which

consists of current impulses in two directions, both positive and negative.

The editor further refers to an article contained in the catalog of another firm which purports to be a reprint from an article written by an independent, unbiased, fair-minded scientific investigator, wherein the electrolytic rectifier is *apparently* shown to be what the editor quotes above.

If the article in the catalog is a *reprint*, where did it appear originally, I mean in what scientific journal? I have searched, but failed to find it.

The gist of the article referred to is, "The chemical rectifier allows the alternating current to pass in one direction, but by its valve-like action prevents the current from passing in the opposite direction, and instead of rectifying one-half of the cycle, eliminates it altogether," as shown herein—

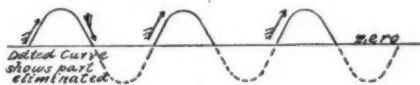


Fig. 2

(Fig. 2) by the solid line, the dotted lines showing the suppressed part.

It is further asserted that the closing of the valve is not instantaneous and that there is actually a negative current. From Fig. 1 it will be seen how near this statement comes to the actual truth, and why all the current is rectified, so that there can be no negative current. The time required by each valve to close is less than one thousandth of a second, as has been ascertained by Prof. Burgess and several other scientific investigators. That no current can flow in the opposite direction under these conditions, is perfectly clear.

The sale of over 3000 rectifiers by this firm alone attests its popularity with the medical men, and the improvement mentioned makes this device the equal of any motor generator costing four to six times as much. Further comment is not necessary. All I want is a square deal.

WM. MEYER.

Chicago, Ill.

[In pursuance of our editorial policy to give, as we ask, "the square deal" to every

man who thinks he has not been fairly dealt with in our pages, we take pleasure in printing Mr. Meyer's letter. While the writer (who *didn't* pen the criticised comment which was written by a gentleman not on our editorial staff) is not an expert in electrotherapeutics he has entire faith in the probity, square dealing and "know-how" of Meyer, Betz and other men and firms dealing in electrical apparatus. Therefore, if we have done any of them injustice, we are very glad to make the *amende honorable*.—ED.]

EUMYDRIN

Guis. Massini reports, in *The Gazzeta degli Ospitale*, concerning eumydrin as follows: Seeing that atropine readily gives rise to general disturbances and intoxications, eumydrin proves itself, in many cases, an advantageous substitute. In doses of from 1 to 3 milligrams (gr. 1-64 to gr. 3-64) it can be given for some time without producing any severe general disturbances. Most satisfactory did this agent prove in gastric neuroses with hyperchlorhydria and increasing gastric pains. In other pains, too, which proceeded from disturbances in the digestive tract, as in ileus, appendicitis or proctitis, good results were obtained from eumydrin. The profuse perspirations of phthisical patients could, however, not always be controlled with this remedy.—*Wien. Med. Wochens.*, 1908, No. 22.

"THE DOCTORS OF KAINTUCK"

Know ye the land of honest hearts,
Of friendship pure and true,
Of hills and dales and mighty caves,
The land of grass so blue?
There is no place on God's green earth,
Wherever you may roam,
That cheers the heart so fondly as
The Old Kentucky Home.

Know ye the land where maidens fair,
With face and form divine,
Make men believe that women are
Nowhere on earth so fine?
I've lost my heart—how often, I
Do really not recall—
On maidens bred in Old Kaintuck;
God bless them, one and all!

Know ye the land so full of cheer
And full of colonels bold,
The land where every gentleman
Loves bourbon, fine and old?
When one is sick, when one is well,
The medicine to choose
To make him well, to keep him well,
Is old Kentucky booze.

Know ye the land of blooded stock,
As fine as can be found,
The home of many a noble steed
For blood and speed renowned?
Fine were the winners of the race
In days of ancient Rome;
But finest is the stock bred in
The Old Kentucky Home.

Know ye the land of brain and brawn,
Of knowledge and of skill,
Of men whose deeds the annals of
Our grand profession fill?
MacDowell, greatest of them all,
A man of brains and pluck;
He is the type of doctors found
Right here in Old Kaintuck.

I'll raise my glass and toast the State
Of horses that are fine,
Of liquid happiness, and girls,
Of face and form divine.
But most of all I'll drink to you
For health, success, good luck,
The noblest products of your State,
The doctors of Kaintuck!

OTTO JUETTNER.

Cincinnati, O.

[Most of the readers of CLINICAL MEDICINE know Dr. Juettner, not only as an able writer and teacher but also as one of the "faculty" of our postgraduate course. How many of them know that he is a poet? Proof? Here you have it! This poem was read at the meeting of the Campbell and Kenton County (South Cincinnati) Medical Society, December 17, 1908.

By the way, I wonder how many of our readers know that Dr. Juettner gives practical courses in physical therapeutics lasting two weeks and embracing all physical methods (massage, hydrotherapy, electricity, light, x-ray work, etc.). Anyone interested in this kind of work will find it worth while to correspond with Dr. Juettner.

Another interesting piece of work by Juettner is his forthcoming volume on "Daniel Drake and His Followers." Drake was to the Middle West what Rush was to the East. We shall give this book a warm welcome.—ED.]



CLINICAL · MEDICINE POST-GRADUATE SCHOOL *&* THERAPEUTICS

George F. Butler, M. D., Director
Thomas J. Mays, M. D.
Otto Juettner, M. D.

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PART TWO—LESSON TWO

INNERVATION (Continued)

NERVE SEDATION

Coniine Hydrobromide is a salt of an alkaloid of conium, and deserves a place among the motor depressants. Its principal action is upon the nervous system, impairing the conductivity of the nerves. The brain seems to be uninfluenced as well as muscular irritability. The impairment of the conductivity of the nerves is first manifested in the peripheries, the influence gradually ascending until the spinal cord is involved. In very large doses this drug acts as a depressant upon the respiratory centers. It is readily absorbed, elimination taking place chiefly through the kidneys and by expiration.

Burggraave reports experiencing the following effect upon taking coniine: Tendency to repose and slumber without fatigue, quite different from that of morphine, awaking calm and without headache; soft pulse; notable diuresis and diaphoresis. In a word, coniine is a calmative to sensory and motor derangement, the moderator of reflex excitability.

Specifically, coniine is indicated in diseases of the cord, in neuralgia, in conditions where there are lancinating pains, in insomnia and in neuropathic excitement. It may be given with the mydriatics as an

antispasmodic, for hyperesthetic and neurotic pains, irritations of the spinal cord, painful spasms of the sphincters, etc. In cutaneous hyperesthesia, pruritus, angina pectoris, its administration has met with good success. In all maladies of infancy where there is hyperesthesia it may be employed with benefit.

The drug should be employed more than it is in motor spasm, chorea and epilepsy. Alone it may be insufficient, but it aids other remedies greatly and should form part of the treatment. In insomnia, accompanied by motor restlessness, muscular twitching with cerebral fullness, no better combination can be administered than coniine and sulphonal or trional. However, it is best to give only small doses of each of these two hours apart, or three times, say at 6, 8 and 10 o'clock p. m. Ordinarily it would be unnecessary to give the same dose the following night, as a certain cumulative action of these remedies usually suffices to produce sleep the next night after administration of a full dose. In many cases of mental perturbation coniine has proven highly useful.

Shaller has called attention to its value in cases where the patient fears the coming on of insanity, or actually shows evidence

of mental aberration, also in the nervous disturbances incidental to the menopause. In fact any one of the whole group of the so-called hysteric-affections is speedily controlled by coniine. These generally show a state of morbid excitability, and the consequent inability to withstand the numberless petty irritations of life, without an explosion of temper or emotion. Here coniine is more efficient than valerian and pleasanter to administer. The two are synergistic and may often be combined with advantage.

Dysmenorrheas of the spasmodic variety, and when connected with pelvic inflammation, are well controlled by coniine, either alone or in combination. The best preparation is the hydrobromide, the dose of which is a milligram, to be repeated as often as the condition indicates; every ten to twenty minutes in acute or painful affections, or three times as much every four hours in chronic forms of disease. Subcutaneously the hydrobromides may be given in watery solutions in doses to suit.

Physostigmine, the alkaloid of *physostigma venenosa* (calabar bean), stimulates the salivary, gastric and intestinal secretions, and in small doses increases arterial tension, the heart-action becoming slower and stronger. As with coniine, the mind is comparatively unaffected by physostigmine, remaining lucid even upon the verge of collapse. The spinal cord, however, appears to bear the principal shock, total abolition of reflex activity indicating a selective action of the drug. To its effect on the motor nerves, occasioning a diminution of power, must be attributed the muscular debility and paralytic symptoms manifested under the administration of toxic doses. No interference with respiration is caused by moderate doses of the drug.

Applied locally to the conjunctiva or introduced into the circulation, whether by ingestion or injection, physostigmine causes contraction of the pupil and lowers intraocular pressure. The drug is excreted principally by the kidneys. Physostigmine is used extensively by ophthalmologists to contract the pupil and to oppose the effects of atropine,

also in treating glaucoma and other diseases of the eye.

Physostigmine, in combination with atropine and strychnine, has proved highly efficacious in constipation. Gastric and intestinal dilation has been successfully treated by this drug. In flatulence it is one of the most efficient remedies. In cases of morphinism, when there is feeble circulation, 1-100 of a grain, hypodermically, takes the place of morphine and does the patient an immense amount of good. The dose, however, must not be repeated more than once in twelve hours, nor increased, else the depressing effects of the drug may become manifest and do harm. The dose ranges from 1-1000 to 1-250 of a grain. The daily dose of physostigmine, for an adult, should not exceed 1-50 of a grain divided.

Aspidospermine is another drug which resembles coniine in its action upon the nervous system. It affects the motor mechanism by its influence upon the motor nerve and lessens the reflexes through its influence on the spinal cord. Excessive doses cause vertigo and headache, together with paralysis of the extremities, the lower being first affected. It is analogous to the vegetable bitters in its action upon the stomach. It depresses the heart, causing it to beat slower, and reduces arterial tension. The drug deepens the inspiration and increases the respiratory movement. It is chiefly eliminated through the kidneys.

Aspidospermine is one of the most valuable remedies we have in the treatment of dyspnea of whatever variety. It stimulates the breathing mechanism, slows and steadies the heart, the effect desired in all cases of dyspnea. If given properly, it will invariably produce favorable results. It is far superior to *grindelia* in the treatment of spasmodic disorders of the respiratory system. It is even of great value in overcoming cyanosis in pneumonia and stimulating the respiratory apparatus.

It is best to begin with small doses of aspidospermine, repeating every hour or oftener until the desired effects have been obtained. The dose thus ascertained may subsequently

be given at once. For hypodermic use the hydrochloride is suited, by its ready solubility in water, the dose being from 1-2 to 2 milligrams.

Zinc Cyanide has an action similar to that of hydrocyanic acid. This salt soothes the disturbed condition of the nervous system originating from increased sensibility of the cerebral-spinal system and excitement of the heart. It may soothe intense pain, calm exalted sensibility and prevent reflex spasm.

In laryngitis and acute respiratory inflammation zinc cyanide may be associated with aconitine, digitalin and strychnine. In spasmodic and painful affections of the air-passages and abdominal organs, in convulsions, cough (including that of phthisis), cardialgias, colics, vomiting, also in the chronic nervous maladies, epilepsy, chorea, hypochondria and hysteria it will be found of value. In organic diseases of the heart and great vessels it calms overaction. In cardialgias we may add strychnine or hyoscyamine, after having emptied the bowel. In heart-cases join the digitalis with an arsenate, when the dosage may be a granule or two, four or five times a day. In neuroses veratrine, coniine, atropine, strychnine, bromides or other remedies may be indicated.

In acute cases it is wise to give the zinc cyanide cautiously at first; in children a dose of 1-60 grain every hour or two, until the susceptibility is ascertained; in adults this dose may be repeated every quarter of an hour, or doubled. It is always better to use the smaller dose and multiply the doses, as the drug is quickly decomposed or eliminated and thus the irritation of the stomach is avoided.

Zinc Valerianate presents one of the best agents from which to secure the best remedial values of valerian. It is of value in insomnias of fevers, sexual excitement, hysteria, etc. The dose of zinc valerianate, for an adult, is 1-2 grain.

Camphor Monobromide is another excellent sedative. The insomnia of fatigue and that of nervous exhaustion are usually treated successfully by this drug. It is best given in doses of one grain every quarter

of an hour till effect. For similar conditions in children it is very beneficial. It does not usually irritate the stomach as does crude camphor.

As a sexual sedative it is far more reliable than camphor itself; it almost never fails to allay sexual excitement. It has also proved efficacious in many cases of spermatorrhea. It is one of the best sedatives of the genital system. Sometimes it proves useful in hysteric excitement, that due generally to the genital system.

Camphor monobromide is useful to overcome the nervous depressions, also the pains of influenza. Frequently it is combined with acetanilid and caffeine in the treatment of nervous and other headaches. It may be employed in delirium tremens, whooping-cough, chorea and petit-mal.

Camphor monobromide produces vast depressing effects on the vitality, more so than the alkali bromides, and to children and delicate females it is superior to these salts. The usual dose of camphor monobromide is 1-6 to 1-2 grain. Tablets are prepared containing one grain each, but it may be given as high as 5 grains at a dose.

HYPNOTICS

We will now take up another class of sedatives, which because of their peculiar special action are grouped as hypnotics, drugs that produce sleep. They may be divided into those which relieve pain and those which have no pain-relieving power. The former class of hypnotics obviously should be employed in diseases in which there is pain, while the latter are appropriately prescribed when pain is absent. Thus the chlorals produce sleep in the ordinary functional insomnias, but if the sleeplessness is due to pain, opium (or one of its alkaloids) are the drug to be employed.

Sleeplessness is one of the most troublesome ailments which medical practitioners are called upon to treat. It is annoying to the patient—to how great an extent probably only those who suffer from it can appreciate. It is troublesome to the physician because of its intractable character. Much, however, of the difficulty of treating insomnia

satisfactorily lies in the complex association of the malady. The measures which will readily procure sleep under one set of circumstances fail when employed under other circumstances, and yet the causes of such failures often remain undiscovered because they are not sought for.

Insomnia is one of the earliest and most persistent symptoms of insanity, and can often be traced back to care, grief, terror, or to other forms of mental shock. In this kind of insomnia the mind is occupied by some train of thought which makes it difficult to go to sleep, and when at last asleep, the dreams are on one subject, the brain remaining active, and getting no rest, wears itself out. As a result there is destruction of the red blood-corpuscles, loss of bodily weight, hallucinations with a tendency to suicide, homicide or epilepsy, and meningeal inflammation from excess of blood supply.

Sleeplessness of this variety becomes dangerous when accompanied by depression of the spirits, despondency and melancholia, for these are symptoms of approaching insanity. With a depression of the spirits there may be suicidal impulses, although there may be an effort on the part of the patient to throw friends off their guard by simulated cheerfulness. But the whole subject of insomnia will be taken up later when we come to the treatment of individual diseases and special conditions, when the physiology of sleep and the different forms of insomnia, with treatment appropriate to each, will be considered.

In this lesson we shall speak only of the various drugs, the more important drugs employed to produce sleep. In the form of insomnia just described chloral is the great remedy, but the hypnotic must be continued until the patient has had full five or six nights of uninterrupted sleep. There will be less likelihood of the chloral habit or dependence on hypnotics when given in this way than with the usual irregular and occasional administration.

After a week of artificial sleep the patient probably will sleep naturally. Chloral in ordinary doses is the surest hypnotic we

have, and that will be the first drug now to be discussed.

Atropine.—This is one of the most important remedial agents at our disposal, whether we consider the wide range of its action, the power of its manifestations, or the enormous number of cases in the clinical field to which it is applicable.

The physiologic effects of atropine, when taken in ordinary doses, are as follows, the symptoms appearing successively: Dryness of the mouth and throat, thirst, disordered vision, paralysis of accommodation, alteration of the voice and aphonia; this is followed by rapid pulse, redness of the skin, vertigo, headache, delirium. If the alkaloid is then discontinued the symptoms subside in reverse order within twenty-four hours, excepting those pertaining to the eye, which may last longer.

The larger the dose, the slighter is the preliminary stage of excitement and the more rapidly paralytic symptoms supervene. Deglutition becomes impossible. The symptoms resemble somewhat those of rabies, the conjunctivæ being injected, the eyes prominent, the face crimson, the iris has disappeared, while furious delirium may set in. This may be followed by complete adynamia and a fall of the pulse, which had increased to 150 per minute. Respiration becomes difficult, the skin becomes anesthetic and a soporous state supervenes, with general or local convulsions, retention and the incontinence of urine and feces, weakening and irregularity of the pulse, and death by asphyxia within three to thirty-six hours.

Large doses paralyze the cutaneous terminations of the muscular motor nerves, also the cutaneous nerve-ends. Atropine exerts more local anesthetic action than does morphine. It stops glandular secretion and arrests the peristalsis of the intestines. This action is best shown when the circular muscular fibers are contracted; and it occurs also in the stomach, spleen, bladder, uterus and bronchi.

Small doses lessen the excitability of the ganglionic system of the intestine, bladder, ureters and uterus, perhaps paralyzing the

smooth muscular fibers. The redness of the face depends on local vasodilation, or upon the rapid pulse, and slightly on the rise of blood-pressure. But this rise, according to Sollmann, is only manifested by very small doses of atropine, and not always then. It is always brief, and is quickly followed by a marked fall in blood-pressure after the exhibition of full doses. Zeller observed that when applied locally atropine dilates the arteries, accelerating the circulation in the veins and capillaries not dilated. It lessens the number of leukocytes and checks their migration and their ameboid movement. Small doses increase the excretion of urine. It checks all of the secretions, except possibly that of the gastric juice. Small doses prolong and deepen respirations. They also paralyze cardiac inhibition, directly antagonizing aconitine. Atropine elevates temperature by increasing heat formation.

The therapeutic applications of atropine are too numerous for even brief mention. In general it is our most powerful agent to relieve spasm, and since in the majority of cases pain is due to spasmodic contraction, atropine is even a better remedy than morphine for pain in general. This is especially true in the very painful affections attending the passage of a calculus through a narrow duct, as with gallstones and renal calculi. Atropine is more effective here as an analgesant than morphine, and much less perilous.

Atropine has proven itself the most prompt and effective hemostatic as yet tested. The reason of this action is not easy to see, and one is tempted to ascribe it to the afflux of blood to the surface of the body and away from the bleeding vessels. This action has been manifested in every variety of hemorrhage to which the human subject is liable, with the exception of cases of ulcerative erosion of large vessels, such as occasionally occurs in late stages of rapidly advancing pulmonary phthisis and in typhoid intestinal ulcerations.

Small doses of atropine powerfully stimulate the uterine muscle, and for this it has been successfully employed instead of ergot.

It is applicable in the whole range of spasmodic affections, especially in the first stage of an epileptic convulsion, where by combating the cerebral anemia it aborts the paroxysm.

Hyoscine.—This alkaloid resembles atropine in its effect upon the nerve-terminals, but it is much more analgesic to the sensory nerve-ends. Instead of stimulating the brain, hyoscine in small doses causes a sense of fatigue and drowsiness. Full doses sometimes induce sleep with a suddenness that is striking. The sleep is normal, the patient may be aroused readily, and awakes refreshed at the end of about eight hours. Full doses may occasion effects so closely resembling those of atropine that it seems probable that decomposition may occur, atropine being produced. Tolerance is not established by continuous taking of hyoscine, even for years.

As an antispasmodic and an analgesic hyoscine is superior to atropine. In choosing between the two, atropine should be looked upon as stimulant, hyoscine as sedative. Atropine prevents sleep and induces delirium, hyoscine produces sleep and quiets delirium. Atropine causes cerebral hyperemia, hyoscine cerebral anemia.

Hyoscine has enormously increased in popularity in the last few years, since it has been employed very largely in connection with morphine as a general hypodermic anesthetic. By the employment of this combination the quantity of chloroform or ether required is very markedly reduced, and may even be rendered altogether unnecessary in many cases. After the first injection all fear of operation disappears, thus facilitating the work of the surgeon and reducing the liability of shock. In case of railway accident the often numerous patients can be rendered comfortable at once and content to wait their turn. The dressing of wounds, the setting of fractures and reduction of dislocations are greatly facilitated, without resort to the volatile anesthetics. Nervous apprehension disappears from the patient's mind, and this fruitful source of danger is thus avoided. Postoperative pain, vomiting, inhalation

pneumonia, and all the other evils arising from large doses of the volatile anesthetics, are prevented by this method. The power of hyoscine to check secretion facilitates the work of the surgeon upon the mouth, nose and upper air-passages.

Nitrous oxide, universally admitted to be the safest of all previously known anesthetics, causes a death in from fifty thousand to one hundred and fifty thousand administrations; the mortality from hyoscine-morphine is very much smaller.

The Other Alkaloids of this group are hyoscyamine, atropamine, belladonnine, atropine, etc. Others known as mandragorine, daturine, duboisine, etc., probably are mixtures of atropine, hyoscine and the other less-known alkaloids. Their chemistry has not at present been sufficiently elucidated, nor have their various properties been determined with such accuracy as to warrant their separate employment. At present their principal importance lies in their existence as impurities in the commercial atropine and the commercial hyoscine.

The latter consideration applies especially to scopolamine. Some specimens of the drug named appear to be quite pure hyoscine, others contain atropine, or some unknown alkaloid, which seriously and detrimentally modifies their action. Whether absolutely pure scopolamine is identical with hyoscine or not, it seems certain that the use of the scopolamines of commerce has resulted in a long list of fatalities, establishing a mortality which *does not apply to the hyoscine derived from the henbane plant, hyoscyamus niger*. This product is a much more expensive article than scopolamine from scopolia. In view of these facts it seems that, despite official sanction, the cheaper scopolamine (not derived from hyoscyamus) should not be sold as hyoscine, but that the purchaser should be allowed to exercise his judgment in the choice. If he believes, as the writer does, that hyoscine from hyoscyamus is a better article therapeutically, and if he is willing to pay an increased price for it, he should have the privilege of doing so.

PHYSIOTHERAPY

ELECTROTHERAPY

In our last two chapters (Nov. and Dec., 1908) we discussed in a general way the principles upon which the science of electricity rests. This is the part of the subject which is classified under the head of *electrophysics*. In applying the electrophysical principles to any one of the several forms or manifestations of electrical force, it will be necessary for intelligent discussion of the special subject to become familiar with the construction and uses of the instruments or apparatus which are necessary for the production of a special kind of electricity. This division of the general subject is known as *electromechanics*.

After familiarizing ourselves with the principles of electromechanics (sometimes called *applied electrophysics*) we are prepared to study the uses of electrical instruments and the currents produced by them in the treatment of disease. The study of the physiological action and therapeutic uses of electrical currents is known as *electrotherapeutics*.

We shall begin our discussion by a consideration of the electromechanics and therapeutic uses of the best-known, but not by any means most easily understood, instrument which is familiar to every person who has ever handled a toy-battery, to-wit, the faradic induction coil.

THE FARADIC INDUCTION COIL

This instrument consists of an iron core, made of a bundle of iron wire or a solid piece of iron which is covered with some insulating material such as paraffin paper. Around this core a course of wire is wound, called the primary coil. This is also covered with insulating material. Then follows a winding of finer wire, the secondary coil. Thus we have a core, a primary coil and secondary coil entirely separated from one another by insulation.

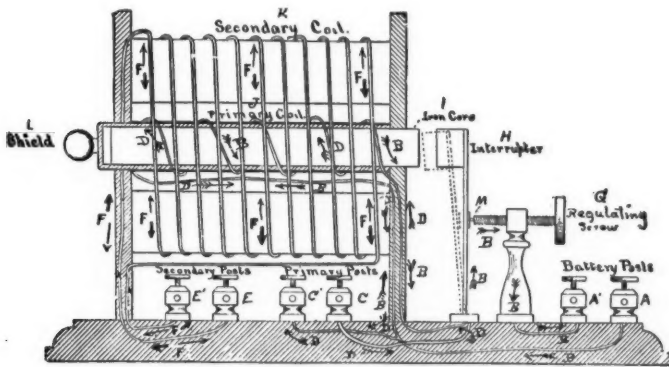
Look at the diagram (from the "Electrotherapeutic Guide") and follow the course of the wires which start at the two posts (A) and (A'). These two posts represent the two elements (positive and negative) of

the battery generating and furnishing the current. The current is constant (galvanic). The wire from (A) is connected with one of the primary binding posts (C'). Before it gets there, however, it will be seen to split into distinct wires, one of which is seen to ascend and form the primary coil (D and B) winding around the core. For the present do not notice the direction in which the arrows point. This will be

mer. When there is contact between core and hammer there is a gap at (M).

The battery-post (A') is connected with the post upon which the regulating screw is mounted. The primary binding post (C) connects with the circuit-breaker. The primary binding posts (C and C') hold the wires that go to the patient.

Let us follow the complete circuit. From (A) to the primary coil and to (C'), then to



Faradic Induction Coil

made clearer later on. After winding around the helix it returns and connects with the circuit-breaker, which is the vibrator, or interrupting hammer.

Looking at the diagram you notice at the extreme right a battery-post (A), then another battery-post (A'), then a post upon which the regulating screw (G) is mounted, and finally the circuit-breaker. This circuit-breaker is a sort of a hammer (H), mounted on top of a spring which is in contact with the regulating screw at (M). This end of the regulating screw is a platinum point.

The spring of the circuit-breaker may move forward (see diagram in broken lines), causing a gap at (M) and breaking the circuit at that point. If the spring moves back, contact will be perfect at (M), and the circuit, therefore, complete. The hammer is placed opposite one end of the helix, touching it when the spring carries the hammer forward. When there is contact at (M), there is a gap between helix and ham-

the circuit-breaker, then to (C). When contact at (M) is complete, the circuit at that point is perfect. The only gap or break in the circuit is between the two binding posts at (C') and (C). This break is filled by the patient's body.

The Primary Current.—When

the battery is generating electricity, the current will pass through the primary wire which winds around the helix. The latter is magnetized while the current passes. The magnetic helix will attract the hammer of the circuit-breaker and cause a break at (M). The moment this break occurs, the circuit is broken, the current stops, the helix ceases to be magnetic and the hammer is let go of and springs back to its original position, which means that contact at (M) is again made and the circuit of the current reestablished. The helix again becomes magnetic, the hammer is again attracted toward the helix and away from the platinum point at (M). It is a continuous make and break of the circuit.

The Secondary Coil (F) is not connected with the battery. Being placed in the magnetic field of the primary coil, it gets its current by induction from the primary coil. Its only attachments are to its own binding posts (E and E') between which the patient's body is interposed. The make and break

of the circuit in the secondary coil corresponds in every particular to the make and break in the primary circuit. Being an induced current its direction or polarity is constantly changing.

Most coils are provided with what is called a shield (L) which can be pulled out, thereby exposing more and more of the helix and increasing the amount of electricity involved in the magnetization of the core.

The make-and-break of a circuit gives rise to some characteristic physical effects. Every interruption of the current means a reversal of its direction or polarity. Thus we see that the *faradic current is an alternating current*. Since the alternations are comparatively slow, we may speak of interrupted currents of low frequency. The frequency of an alternating current, as we have seen in our first lesson, expresses the speed of alternation.

The Active Current.—When the current is actively in evidence, magnetization of the helix is surrounded by lines of magnetic radiation. Thus we see that the waves of magnetism radiate in the same space which is the scene of action of the electrical radiation in the primary and secondary coil. There is a necessary cutting or intersection of magnetic waves by the convolution of the primary and secondary windings of wire. The more convolutions of wire, the greater the number of intersections of magnetic waves. This is of importance because upon the number of intersections of magnetic and electrical lines of energy depends the increase in the electromotive force (voltage) of the current.

Thus we see that the faradic current is characterized by *alternation of polarity*, the frequency of alternation being comparatively low, and by an increase in the electromotive force, the increase depending on the number of turns in the primary or secondary wire. The fact that the direction of the current is reversed whenever an interruption of the circuit occurs is illustrated in our diagram by the position of the arrows. (See position of arrows indicating opposite directions of current flow in the same circuit at B and D).

The Induction Coil is nowadays usually mounted on a marble slab in conjunction with a rheostat and forms an important part of the so-called faradic-galvanic table or wall-plate.

To apply the current we need conducting cords, which should be pliable, strong, durable and of sufficient length. The cord terminates in metal tips, one of which is fastened to a binding post connected with the battery. The other tip connects with the electrode used. There are many different shapes, sizes and kinds of electrodes, depending on the kind of work the operator wishes to do. The most common electrodes for a faradic current are sponge-electrodes and metal handles.

The Physiological Effects and therapeutic use of the faradic current are suggested by the markedly excitant and stimulating action on muscular tissue. In response to a faradic current muscular fibers contract more or less violently. This means physiological activity for the contracted fibers and involves increased local oxidation and metabolism. The muscle-fiber requires more blood after exercise of this kind to furnish the oxygen required. In this way more nutriment is carried to the muscle, and the latter improves both in functional power and in substance. The faradic current, therefore, is a muscular tonic within physiological limitations, i. e., if the exercise produced by the current is not overdone and if the blood drawn to the active muscle is of good nutrient quality.

The exercise involved in faradic contraction of muscle-tissue must not be carried to the point of fatigue or exhaustion of the fibers. It must not bruise or jar them, but must be closely in imitation of physiological muscle-exercise. Only then will the distinctly tonic effect of the faradic current become manifest.

Therapeutic Application—Spasmodic contractions of muscle, e. g. cramps in the extremities or the spasmodic form of dysmenorrhea, are always due to some perversion of the functional activity of the nerves controlling the muscles affected. Since functional nerve-diseases *per se* do not exist but

are always produced by some unidentified change in the structure and mutual relation of the neurons, and are, for this reason, diseases of local nutrition, it is plain that the methodical use of the faradic current under these circumstances has a logical therapeutic significance. It is a tonic in the proper sense of the word. It improves the tone of muscle-tissue by altering, that is, by improving the local nutrition. In this way it counteracts spasm because the latter is due to a lack of tone of the muscle or control of the muscle function through the nerve supply.

It stands to reason that the intensity of the tonic effect of a faradic current will depend on the extent of the area treated and on the relative adaptability of the current to take the place of physiological exercise. A mild faradic current administered to a patient sitting in a bath-tub, the water reaching to the costal border (one pole in the water, the other applied to the neck, chest and back by means of a sponge-electrode), ought to—other things being equal—produce a fine, gentle stimulating effect. There must be no pain, only a gentle tingling. Through the muscular tissue the current is bound to effect contiguous structures.

The faradic current is useful in cases of redundant panniculus adiposus in the abdominal wall. It improves the quality of the muscular tissue of the abdominal wall at the expense of the fatty layer. It stimulates the muscular fibers in the walls of the intestines and is, therefore, of value in the treatment of atony and dilation of the stomach and bowels. In rectocele, cystocele, prolapsus, in fact in all conditions produced and aggravated by loss of muscular tone, the faradic current does very well.

The faradic current enhances the effect of massage and may be combined with massage by causing one electrode to be held by the patient, the other by the unengaged hand of the operator. This is a splendid addition to the technic of Thure-Brandt massage. The use of the rectal electrode is of great benefit in the treatment of hysteria. The apparent anodyne action

of a faradic current in neuralgic cases (e. g. sciatica) is due to its alterant action on the muscular tissue and through the latter on the circulation. The blood supply is regenerated and the cry of the nerve for healthy blood is stilled.

The use of violent faradic shocks is never indicated except in paralytic conditions where it is a question of making an impression on tissue that has hardly any vitality left in it. Painful applications of the faradic current are never proper.

Poles in Faradism.—Owing to the fact that the faradic current is an alternating current, it is of little consequence which pole is used. Polarity, which is everything in galvanic and static electricity, is of no consequence in faradic applications. For obvious reasons, the faradic current can not be used for electrolysis or cataphoresis. What has been said concerning the electrodes used in applications of the galvanic current, might be repeated in regard to faradic applications. There are, however, fewer electrodes required because the therapeutic field of the faradic current is small compared to that of galvanic electricity.

COMMENTS ON THE LESSON

We have been gratified with the number of readers of CLINICAL MEDICINE who have enrolled themselves for the course this year—but there ought to be thousands more. The work promises to be of intense interest, and when we get to the subject of Applied Therapeutics we feel positive that every reader of CLINICAL MEDICINE will want to be on the roll. We suggest that you “come in” *at once*. Don’t wait for a blank to fill out—send in your name on a postal card.

The certificates for those who completed the course last year are printed and will soon be ready for distribution. It is a beauty—well worthy to be framed and hung in your office next to your diploma. It represents something actually earned by hard work, and is therefore something to be proud of. Are you planning to earn the certificate for 1909 also, old students?

To new students just a word of explanation: This Postgraduate Course is absolutely free to every paid-up subscriber to *CLINICAL MEDICINE*. All that is necessary is for you to go through the lessons carefully, answer the examination questions at the end of each lesson and send them in, with stamps if you want a report on your grades. If you complete a year's work successfully you get the beautiful certificate of the course. You *should* have (though this is not absolutely necessary) a copy of Dr. Butler's "Materia Medica," Juettner's "Physiotherapy" and the Waugh-Abbott "Textbook of Alkaloidal Practice."

Effects of Strychnine in Different Dosage.—In discussing strychnine, Dr. T. H. Line, Marquette, Nebraska, says: "In small doses it acts as a stimulant or tonic. In over-dose it produces muscular rigidity, often first felt in the muscles of the neck, followed by trembling, jerking of muscles, emprosthotonos, opisthotonos, etc. In a word, the drug is a stimulant until an over-dose is taken, then it acts the opposite way."

"I have received the best results from the hypodermic use of strychnine, and in extreme cases have given 1-40 grain until effect, every two hours, without any serious mishap."

"There is no iron-clad rule that can be followed, people differ so much in their susceptibility to certain drugs. While you can give 1-40 grain strychnine every three hours for weeks to some, others will complain of muscular twitchings after the administration of a few doses of 1-100 grain each, at long intervals. I have never given over 1-30 grain at a dose and I do not believe it is good policy to give this large dose. I prefer, except in a few cases, to follow the dosimetric rule of starting with small doses and give often until effect, then maintain the effect desired by the least possible dose. The quantity any one person can stand is an unknown one—each person is a law unto himself."

In this connection Dr. Fremont E. Wood, Villa Verde, Sonora, Mexico, writes: "In

many forms of vomiting, that of pregnancy and drunkenness especially, very small doses of strychnine arsenate, gr. 1-500, given every hour, will often stop the vomiting. From a former personal prejudice against the administration of strychnine I have come to recognize its value as you advise it in the columns of *THE CLINIC*. In point of fact, during the convalescent stage following typhoid, in my own case, strychnine made me a fast friend."

The Fate of Strychnine in the Body.

—Dr. Wm. V. Secker of Evanston, Ill., explains this as follows: "The fate of strychnine in the body is that it is oxidized and destroyed in part in the liver. This is considered very doubtful by H. C. Wood. Strychnine absorption is immediate, it being found in the urine five minutes after absorption. It is found principally in the spinal cord. Strychnine is eliminated from the body by the kidneys, partly unchanged and partly as strychnic acid. It is also eliminated in the sweat and saliva. Its elimination is slow, it being found in the urine three to eight days afterward. Its action is not long, but is compared to that of a strike of a whip—it hurts while you get it but not long afterward."

Frequency of Administration of Strychnine.

—Regarding this Dr. W. C. Wolverton, Linton, N. D., writes: "This depends largely upon the condition calling for the use of strychnine. As a stomachic it should be given shortly before each meal. In persistent vomiting a milligram of strychnine arsenate should be given every hour until vomiting ceases. In some cases of neurasthenia it is sometimes necessary to give a dose every hour until the first physiologic effects of the drug become manifest. In convalescence, a small dose of the arsenate may be given every three or four hours. In all cases, however, the drug is best administered in small dosage frequently repeated *to effect*, then as often as necessary to maintain the desired effect."

Amount of Arsenic in Strychnine Arsenate.

—This is beautifully computed by Dr. F. J. Weigand, Richmond Hill, N. Y.: "The formula of strychnine ar-

senate is written: $C_{21}H_{22}N_2O_2.H_3AsO_4 + \frac{1}{2}H_2O$. Molecular weight, 485. Acid, computed as arsenous, 26.

"Percentage of arsenic as As., 15.5.

"Percentage as arsenic acid, 29.

"The arsenic exists in strychnine arsenate as an arsenic-acid radical, not as an arsenous-acid radical. Arsenic acid dosage (Merck) is gr. 1-12, maximum single, and gr. 1-6 daily; but as the strychnine in the arsenate is the more powerful principle, the arsenate cannot be given in dosage proportionate to its arsenic or arsenic acid-content except in the sense that it reduces the strychnine content as compared to the sulphate and nitrate.

"Strychnine in arsenate, 68 percent. Strychnine in sulphate, 78 percent. Strychnine in nitrate, 84 percent. From this it appears that the arsenate can be given in 1-6 or 1-7 larger dose than the sulphate, and 1-4 larger than the nitrate." True, though the potency and peculiar tonic and reconstructant properties of the arsenic radical must not be lost sight of when considering dosage.

Strychnine in Pneumonia.—Dr. W. C. Wolverton also answers this question as follows: "In pneumonia strychnine is the drug of chief reliance of most physicians today. In pneumonia, and in fact all acute febrile diseases, aconitine, digitalin and veratrine are indicated, except in children, the aged, or in any case in which there are signs of adynamia or possibly approaching asthenia; in such cases the veratrine may well be replaced by strychnine arsenate. But the senseless routine administration of strychnine in every case of pneumonia is certainly to be condemned; strychnine is to be administered, as stated above, in asthenic states, or at the first sign of approaching adynamia. Strychnine is indicated, urgently, in weakening of the right heart, in pneumonia, also in tonic doses during convalescence or in delayed resolutions."

Strychnine in Spasmodic Conditions.

—This question is answered by one of our students as follows: "In spasmodic conditions it is frequently very efficient, in

combination with hyoscyamine and sometimes glonoin, for in these conditions the spasm is often due to diminished or lost control of the part by the central nervous system. The hyoscyamine directly relieves the spasm by its action on the terminal nerves, and the strychnine restores the central nervous control of the part. Glonoin is a rapidly acting, evanescent antispasmodic which relieves while the hyoscyamine is taking effect."

Hydrastinine and Hydrastine.—Dr. V. S. Ernst, Bridgewater, N. S., makes the following comment: "Hydrastinine causes little disturbance of the centers of motion and sensation, while hydrastine has a greater tendency in that direction. The arterial tension rises further than after hydrastine, and this effect is much more lasting; it does not depress the heart. Hydrastine acts somewhat like aconitine. It causes rhythmic contractions of the uterus, but acts solely on the vessels; hydrastine acts as an oxytocic, but is very slow. Hydrastinine far surpasses hydrastine as a hemostatic, especially in functional hemorrhage from the female pelvic organs."

Treatment of Rheumatic and Gouty Cases.—Dr. T. R. Reed of Cheshire, O., describes a case which excellently illustrates his method and will prove of interest, and we believe of value, to students of the course:

"Mr. B., of Clark St., called me to relieve him of aches and pains. I found a well-developed case of muscular rheumatism alternating from shoulders to legs and back and chest, bowels constipated, skin dry and hot, tongue coated, urine scanty and highly colored, secretions all disordered in fact. He had been taking an old mixture of sodium salicylate which was highly discolored from age, with no result but nausea and discomfort. Mr. B. was quite plethoric and nervous, a good hand at a table of nitrogenous viands.

"I proceeded to clean him up with small doses of calomel, podophyllin, and leptandrin given every half hour until six doses had been taken, then again after four hours. Saline laxative to result; then I

gave as an intestinal antiseptic the sulphocarbolates, and small doses of colchicine four times a day with macrotin every hour to relieve, then every four hours, continuing the saline laxative in the mornings. The colchicine the second day was cut down to three doses a day, then in two days to twice a day, then in three days to one at bedtime, as improvement took place.

"As the kidneys seemed quite tardy in acting I also gave apocynin every two hours which soon remedied the trouble, and in a few days I was enabled to put him on the iron, quinine and strychnine arsenate three times a day and discharge the case. But in a few days they called me again. He had got mixed up as to his feet, one interfering with the other. I found the pupils of his eyes dilated, reflexes exaggerated somewhat. I added some zinc phosphide, four times a day to his medication and increased the arsenates of iron, quinine and strychnine with nuclein, giving thrice daily, for one week, then dropped the zinc phosphide, continuing the arsenates with nuclein in diminished dose for a month. He made a good recovery."

Arterial Degeneration.—Dr. Kate Harpel, Boone, Ia., gives a nice resume of the conditions and causes which produce it. She says it is due to an overgrowth of connective tissue in the arterial coats, followed by deposits of calcareous matter. It commences with an infiltration into the middle and external coats, and a compensatory thickening of the inner coat. Muscular and fibrous tissues may almost disappear in advanced cases, so that the vessels can no longer bear the blood pressure. Among the causes she gives are heredity, biological irritants such as those produced in malaria and syphilis, chemical irritants, as alcohol, lead and uric acid, Bright's disease, constant overfilling of the blood vessels from over eating and drinking, and also muscular overstrain.

Cystitis.—Dr. Wm. A. Wilson, Dundurn, Saskatchewan, gives the treatment of acute cystitis as follows: "Rest in bed; diet of milk

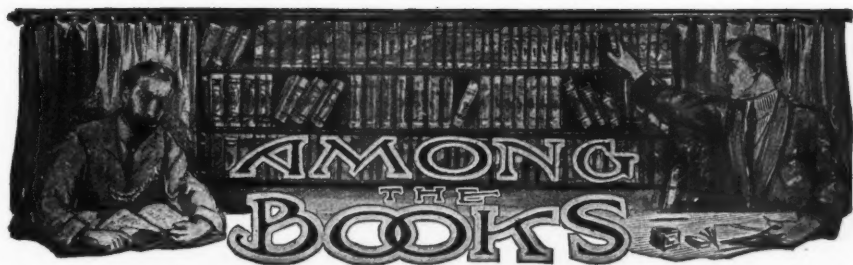
and barley water, water *ad lib.* Aconitine or gelsemin for fever; urotropin (with benzoic acid) as diuretic and antiseptic; give in large doses, 15 grains three or four times daily with water. Calcium sulphide and irrigations of boric acid, or 1:5000 chinosol if pus presents. Arbutin, barosmin and asparagin for their diuretic action and action on mucous membrane. Tonics of iron, strychnine and arsenic in convalescence."

EXAMINATION QUESTIONS

1. Describe the plant from which coniine is derived. By what other name is coniine known?
2. What remedies (excluding morphine and the coal-tar products) would you employ for the relief of facial neuralgia? What general line of treatment for its cure?
3. By what other name is physostigmine known? What effect does it have on the eye? What upon the intestine? What is its physiologic antidote?
4. What is the source of aspidospermine? For what conditions is it most frequently employed? Tell of your personal experience with it.
5. Compare the physiologic action of zinc cyanide and of zinc valerianate. In what way does the former influence cough and pain?
6. What action has atropine upon the circulation? What upon respiration?
7. Explain the *modus operandi* of the relief following the use of atropine in shock? hemorrhage? pain?
8. Describe the hypnotic action of hyoscine. In your opinion is it analgesic and anesthetic? Do you consider scopolamine and hyoscine identical?
9. Describe, in your own language, the faradic induction coil and the flow of currents. Which is the most important pole of the faradic coil?
10. Describe the physiologic effects and therapeutic uses of the faradic current.

RESEARCH QUESTIONS

1. What celebrated historical character committed suicide with conium?
2. What is paralytic ileus and what remedies are useful in treating it?
3. Outline a treatment for persistent flatulence or "abdominal bloat" in women.
4. What are the various theories regarding the nature and physiology of sleep?
5. Give a brief history of the discovery of galvanic and faradic electricity.



GRAY'S "SPECIFIC MEDICATION"

Specific Medication. By Robert Gray, M. D., Pichucalco, Chiapas, Mexico. Printed for the author by The Clinic Publishing Company, 1410 E. Ravenswood Park, Chicago. Price \$1.00.

So many of our readers are familiar with Dr. Gray's work that he needs no introduction, but those who have had a taste of it, through the columns of CLINICAL MEDICINE or the other journals to which Dr. Gray is a frequent contributor, will surely wish to purchase this little book, which contains in small compass a résumé of the peculiar methods of practice which have given Dr. Gray his wonderful success.

Besides an introduction, this book contains five chapters. The first, under "Specific Medication," gives the special formulas and special methods which Dr. Gray has employed with such success that he is inclined even to call them "specifics." Among them he includes cures for malaria, pneumonia, typhoid fever, dyspepsia, gonorrhea, and other common diseases. The second chapter is devoted to "The Active Principles," of which Dr. Gray is a warm advocate as well as a skilful user. In the third he takes up "Suggestive Medication," for which he is an enthusiast, and in the fourth, "Specialism" and the means of making it a success. The fifth is devoted to "Mexico, the Magic Realm." This chapter is invaluable to any physician who is considering the possibility of going to this wonderful republic to the south of us. The last sentence in Dr. Gray's book, while it is made to apply to doctors wishing to

locate in Mexico, is a good enough motto for anyone: "Qualify to employ active principles and dispense your own medicine, and you can open your own way to a lucrative practice anywhere you may wish to locate, whether there are too many or not enough doctors."

The price of this little book is \$1.00. While it is small in size, in content it is full of meat and well worth the price. Supplied by The Clinic Publishing Company.

SLUSS'S "EMERGENCY SURGERY"

Emergency Surgery for the General Practitioner. By John W. Sluss, A. M., M. D., of the Indiana University School of Medicine. Five hundred and eighty-four illustrations, some in colors. Published by P. Blakiston's Son & Company, Philadelphia. 1908. Price \$3.50.

This book of flexible leather, gilt edges, round corners, is just what the general practitioner needs, no matter how many large volumes on surgery he may have on his shelves. Large works in many volumes are very needful for study and their details are the foundations and glories of modern surgery. But the plodding general practitioner may be called upon to do surgical work which at any time but in an emergency he would hesitate or decline to do. To such men, especially in the country, such occasions come with the categorical imperative of a "hold-up," and then if he has a few minutes to consult with what he has learned in lecture room, clinic and hospital, he wants some good friend of a book, a *multum in*

parvo, to get a look into, "lest we forget."

The writer of these lines has seen, read, and reviewed many such a book friend, but he does not hesitate to give the palm to this successful effort of Dr. Sluss. Get this book, my friend reader, get acquainted with it, and have a reliable friend in an emergency.

THE MEDICAL RECORD VISITING LIST

We are in receipt of the 1909 edition of The Medical Record Visiting List, issued by William Wood & Company, New York. The price of the 30-patient-a-week list is \$1.25, of the 60-a-week list, \$1.50. In addition to the regular "visiting-list" portion for keeping the physician's accounts, this volume contains a large amount of reading matter not contained in previous editions. This book is one of the old stand-bys—thoroughly good in every way.

OHMANN-DUMESNIL'S "DISEASES OF THE SKIN"

Diseases of the Skin. By A. H. Ohmann-Dumesnil, A. M., M. E., M. D., Ph. D., etc. Third edition, thoroughly revised and enlarged. One hundred and forty original illustrations. Published by C. V. Mosby Medical Book Company, St. Louis. 1908. Price \$4.00.

Even if you have read the best and largest book on skin diseases, you should also study this most practical and helpful book by Dr. Dumesnil. He speaks familiarly, uses no unknown phrases or terms, and will you believe it, uses the weights and measures of the old style! This, among many other features of this "practical guide," shows that the author really desired to be of immediate, practical and useful help to the general practitioner. Thanks!

INTERNATIONAL CLINICS

A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on All Parts of Medicine and

Surgery, by Leading Members of the Medical Profession Throughout the World. Volume III, Eighteenth Series, 1908. Published by J. B. Lippincott Company, Philadelphia and London. 1908. Price \$2.00.

The present quarterly fully maintains its high character for learning and practicality. There is one article among the many other valuable ones, to which we desire to call attention, and which besides its own practical value, of which no doubt many a reader will avail himself, also shows the alertness of the editor in furnishing the Quarterly with everything new or old and renewed in medicine. We refer to "Two Cases of Tetanus Treated with Cholesterin, with Recovery," by M. Almagia, M. D., and G. Mendes, M. D., of Rome, Italy. Tetanus promises to lose its fatality under this treatment.

DAVIS' S "CONSUMPTION"

Consumption, Its Prevention and Cure Without Medicine. By Charles H. Stanley Davis, M. D., Ph. D. Second edition, enlarged. New York: E. B. Treat & Company. 1908. Price \$1.00.

The book, minus its bold title, which finds many a qualification and denial in its pages, gives an excellent account of the subject and properly advises how to treat it, including medical treatment. Physicians will find it of value.

MILLER'S "PARAFFIN IN HERNIA"

Paraffin in Hernia: or The Cure of Rupture by Paraffin Injections. By Charles C. Miller, M. D. Published by the author at 70 State St., Chicago. Pre-paid, \$1.00.

This book of eighty pages comprises the description of a method of treatment which the author thinks is destined to occupy an important place as a cure for rupture, because of the extreme simplicity of the technic and its advantages from an economic standpoint. We shall await with intense interest the verdict of the profession on this subject.



PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report the results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

QUERIES

QUERY 5409.—“Prevention of Nausea.” J. W. L., Georgia, asks: “What will stop nausea? I have a case that I cannot control.”

In order to stop nausea it is essential that we understand the causes, which may be local (gastric) or reflex: A combination of resorcin, delphinine, cocaine and atropine is very generally useful when the nausea is due to an irritable or congested condition of the gastric mucosa.

Hyoscine and morphine, in proper combination, will stop *reflex* vomiting promptly. Vomiting due to gastritis or fermentative conditions of the stomach-contents is best controlled by the exhibition of bismuth and creosote or bismuth and cerium oxalate. Bismuth subnitrate, 5 grains, cerium oxalate, 2 grains, cocaine, gr. 1-12, is one of the most effective antinausea formulæ, but, as we have already stated, we must find and remove the cause of the vomiting.

Orexine tannate is another valuable drug, frequently controlling obstinate nausea of obscure origin. Do not forget that very many attacks of vomiting have their origin in the brain, and sedation of the nerve-centers and the pneumogastric is imperatively demanded. Solanine proves superior to the bromides here.

It may be well to call attention to the fact that the nausea of pregnancy may often be controlled by giving a glass of hot tea or milk and water to the patient in the recumbent position as soon as she awakes. Liquid should be taken through a straw or bent glass tube. In half an hour the woman

may get up for breakfast. Of course somebody has to hand her the draught. Before each meal she is given bismuth subnitrate, cerium oxalate and cocaine (see above formula), and after eating, receives gr. 1 of papayotin with grs. 2 of charcoal. A snug supporter should be worn and the bowels kept open.

QUERY 5410.—“Dosage of a Nervine Formula.” J. R. G., Illinois, is trying gold and arsenic bromide, nickel bromide and strychnine valerianate in a case of nervousness that amounts to mild insanity and wants to know how far he can push or continue the remedies. He gave this combination “every twenty minutes until a nervous spell was abated then at intervals of one hour until two more doses had been taken, when the patient complained of the gums getting sore.” He then abandoned the medicine for the day. The doctor says: “I want to see what this will do for the patient if I can continue the remedy, but do not know how far I dare go with it. This soreness of the gums seems to have come earlier than you would expect it—the first day of its use and after only six doses had been taken. It seems to me that this is too potent a drug combination for me to ‘fool’ with without some special instructions.”

Individual conditions govern the dosage of a remedy always. The nervine may be pushed in full doses for a considerable period provided free elimination is maintained, but it is safer to stop exhibition at

the end of two or three weeks for a few days eliminating freely meanwhile. Resuming, begin with smaller doses. One dose every twenty minutes is extremely rapid medication, only intended for immediate effect, and we should have given the subsequent doses at longer intervals. Had you suggested that the gums *would* get sore? Patients of this type are very prone to be open to suggestion. However, Doctor, a nerve formula should not be the main remedy in any case of a nonephemeral character. The rule is to give the right remedies for underlying pathological conditions, using the "nervine" and similar combinations to control temporary disorders.

If you will outline clearly clinical conditions and send a specimen of the woman's urine (4 ounces from the entire amount passed in twenty-four hours, stating total amount passed) to the laboratory, the report will assist us in advising further. Avenin, scutellarin and lecithin would probably give excellent results in this case, and the valerianates with strychnine phosphate also might perhaps be pushed in addition. Of course nickel bromide cannot be given in too large quantities.

❖ QUERY 5411.—"Membranous Croup." H. C. S., Tennessee, recently was called to a case of "membranous croup" in a child two and a half years old. He gave the remedy usually advised. "Death occurred three hours later. I am learning that *no* remedy is more than half as good as recommended. This child had very appropriate treatment of other kinds before I saw it."

Unhappily, membranous croup and diphtheria are often (too often) confused. Let us urge you to read very carefully the descriptions of these diseases. Some time ago Candler published his experiences with hydrogen dioxide solution injected hypodermically over the region of the thyroid, in two cases of membranous croup where death was impending. The method advised was as follows: To fifteen drops of hydrogen dioxide (Marchand or Merck—

and be sure it is fresh) add ten drops of distilled water and glycerin, in equal parts. Inject a syringeful into the connective tissue over the trachea (avoiding vessels). In a few moments the membrane will begin to loosen and disintegrate and, within ten minutes, will probably be expelled.

Within one month after the publication of his article two more cases were reported in which life was saved by a resort to this measure, and subsequent tests prove it to be almost positively effective. The solution should be carefully made, the injection being repeated if necessary. It is needless to say that tracheotomy (or intubation) should be at least prepared for in such desperate cases.

This method often will save life where deoxygenation of the blood has advanced to such a stage that recovery would seem impossible. No remedy administered by mouth, even if usually effective, can possibly prove effective when a foreign body prevents respiration. A child here *dies from suffocation*. Were effective treatment administered early and the membrane prevented from forming it would be a different thing.

For instance, suppose two cases present precisely the same pathological condition. A and B (typical cases of membranous croup), present false membrane, evidences of deoxygenation of blood, staring eyes, cyanosis, indrawn abdominal walls, etc.; death is close to both children. In A's case the physician administers promptly a hypodermic of apomorphine and (if he is fully informed he will promptly inject peroxide of hydrogen), at the same time he prepares to intubate or do a tracheotomy. In the other case the doctor merely pushes the indicated remedy, depending upon its well-deserved reputation as a croup remedy! The one child lives, the other dies, but the death was due not to the inefficacy of the drug used but to the lack of proper prompt institution of the remedial measures!

We have gone into this subject at some length because it is important that no one drug or combination of drugs should be

regarded as infallible. We can provide keen and effective weapons, but the hand that wields them must possess not only strength but *skill*.

QUERY 5412.—“Pyrogallic Acid as an Anaphrodisiac.” D. M. B., Texas, has a patient (photographer) who takes a 10-percent solution of pyrogallic acid three times a day for its anaphrodisiac effect. He wants to know whether there is anything better of a nonpoisonous character. The Doctor states that his patient claims that this preparation is extremely efficacious.

We certainly would not advise the internal use of pyrogallic acid in any quantity for any purpose, certainly not as an anaphrodisiac. It is practically never used internally and has an exceedingly deleterious effect upon the body-tissues. Salicylic acid (or salicin) is not as injurious and proves quite efficacious. Calcium sulphide taken to saturation may be depended upon; camphor monobromide is also reasonably effective. However, it seems to us there must be something radically wrong in this case. The normal man living under normal conditions does not need anaphrodisiacs. If you will examine the patient carefully you will probably find some focus of irritation (rectal or urethral) which needs correction. The urine, too, should receive attention. Is this man married?

QUERY 5413.—“The Inevitable Rebellious Leg Ulcer.” I. H. P., Indiana, has, in an otherwise healthy patient, an old ulcer on the leg. He desires an outline of treatment which is “really effective.” The ulcer is as large as a nickel. We are not told the exact location nor whether varicosity is the cause. The following is suggested:

Cleanse the sore thoroughly with solution of hydrogen peroxide; cut away or curet any necrotic tissue or sloughing floor, then apply pure oil of turpentine (Merck) with a camelshair brush; snugly fit into the ulcer a piece of gauze saturated with oil of turpentine, cover with another pad of gauze, a handful of cotton and a snug

bandage. Repeat this dressing daily until discharge ceases and granulation is established and the edges begin to close in. When this point has been reached, start grafting.

Place a few “pin-point” grafts of skin upon the surface (after cleansing well with boric-acid solution or normal saline), taking these grafts from the thigh or the arm of the patient by lifting up a point of skin on a needle point and snipping it off with fine curved scissors. After placing them, flood the area with bovine and cover with a piece of rubber tissue or oiled silk perforated freely with pin-holes; over this lay a piece of gauze soaked with bovine, then another piece of oiled silk (unperforated); cover and bandage in the usual manner. Re-dress twice daily (not removing the perforated tissue but flooding it thoroughly with a mild antiseptic) for three days; by that time the grafts should have “taken.” Now remove the tissue by catching one corner of it with a pair of small dressing forceps and float it up with warm boric-acid solution thrown under it with a dropper. Healing will proceed rapidly now under any mild antiseptic dressing.

Internally you should push iridin, arsenic iodide and the arsenates with nuclein in fairly full doses. Keep the bowels open, Wash the entire limb (or better still, the body) with epsom-salt solution (one ounce to the quart) three times a week.

QUERY 5414.—“Growth on Scalp.” S., Kentucky, has a female patient of about thirty who has something on her head like a cancer, wart or blood-mole. It is of a red-blue or dark-purple color. Her husband cut it open once. It only bled and it seems to be flesh through and through. It is about the size of a small marble. He thinks it has been there only six or eight months, but it is getting larger. “Would any dermal caustic,” he says, “take it off, or will it have to be excised? It is not very sore, but bothers her and is very much in her way.”

This growth may be a wen; on the other hand, it may be a mole with malignant tendency. It should be excised anyhow

as even simple moles are liable to become cancerous in later life. Make two elliptical incisions, one on each side of the tumor, going down at one sweep of the knife through the scalp. Catch the top point of tissue between incisions with a pair of forceps and dissect out with a few sweeps of the scalpel. Stop hemorrhage by pressure, and bring the incisions together with catgut or strong silk—we prefer chromicized gut. Any work on surgery will give the necessary details of technic.

If a skin-covered, noninflammatory, blood filled growth, you might apply sodium ethylate solution as a caustic. Cover the skin around the mole with a little vaseline and very carefully cover with a glass rod the surface of the mole with the caustic liquid. After a minute or two take up with a piece of blotting paper any surplus fluid from the lower edge of the mole. Repeat the application in three days and, if it is a large mole, again in three days or when the slight soreness which follows the application departs. A black eschar will form which will gradually loosen up at the edges and drop off. Do not let your patient remove this forcibly for there may be a raw space underneath which might become infected. No scar results if the work is well done.

QUERY 5415.—“Treatment of Hemorrhoids. Pelvic Congestion.” H. J. A., Washington, desires a “trial treatment” for “hemorrhoids.” From the description it would seem that the patient has a mass of hemorrhoidal tumors—internal, “mixed” and external. The Doctor also desires a treatment for “pelvic congestion.” It would of course be impossible for us to attempt to supply a “set of remedies for hemorrhoids” on approval. In such cases it is essential to continue the application of the principal remedies to effect, and the physician must be skilled enough to recognize the indications for the particular drugs called for at any time.

Internal hemorrhoids should be promptly injected. The technic is simple, and briefly as follows: Inject a 50- to 60-percent

solution of carbolic acid in pure olive oil, using a glass hypodermic syringe holding 30 minims, and a medium (No. 24 to 26) needle. Have the tumors exposed; clean, dry and anoint them with oil; then halfway between apex and base of the tumor insert the needle till the point is in the center of the mass; inject 5 or 10 drops of the solution *very slowly*; turn the point of the needle to the right and inject 2 drops, then to the left and inject 2 more. If the pile is now white and hard, withdraw the needle; if blood follows, reinsert the needle and inject again, repeating till the entire tumor is blanched. Take five minutes at least to inject a large tumor. Occasionally one encounters a sacculated hemorrhoid, when it becomes necessary to insert the needle at another point. Do not leave a tumor till it is coagulated.

Treat the largest tumor first, and attend to three or even four at one sitting, without fear. After injection again anoint the parts and return the mass. If any carbolic fluid has touched the bowel-wall, neutralize with alcohol. Have the bowels kept closed for three days, then open with a night dose of castor oil and a morning saline laxative. Instruct the patient to throw into the bowel, before he goes to stool, four ounces of oil followed by two pints of hot water. Pain after operation may rarely call for an opium and hyoscyamine suppository. A bland antiseptic ointment may be applied with advantage.

Palliative treatment is simple. Inject some good hemorrhoidal astringent at night and after each stool; thoroughly empty the bowels with three hourly doses of calomel and podophyllin, the customary fractional, every other night for a week, and order a saline laxative the next morning. Push esculin and hamamelin as direct remedies. Give every three hours, the usual dose. Leptandrin may be added.

For external hemorrhoids an ointment of bismuth, adrenalin, cocaine and thuja is as nearly perfect as any preparation of the kind can be, giving relief in ninety-five out of one hundred cases, and causing the tumor to shrink rapidly. But of course

such tumors should be incised and the clot turned out.

If you have a well-marked case of internal hemorrhoids, prepare your patient, dilate the sphincter ani and then inject. You should get fifty dollars for the operation, and your patient will tell you a month later that he never spent the amount to better advantage.

It is practically impossible to "cure" most cases of "bleeding piles" by local treatment, but some are easily controlled; injection or excision will be called for finally in most instances.

If you will give us a clearer idea of the clinical conditions present in the case of pelvic congestion we shall be pleased to outline a treatment. Is there specific infection, possibility of pus, retroversion, or rather uterine displacement? Here again "trial treatments" are certainly not likely to prove satisfactory. The "right" remedy for the condition present will do the work every time, but before selecting the remedies a clear idea of the *pathology* is essential. A depleting glycerin and magnesium suppository, together with hot alkaline antiseptic douches (retained), small doses of gelseminine and hydrastin, three times daily, suggest themselves. Thymol iodide solution in oil applied with an intrauterine syringe to the endometrium will also prove useful in many cases. The constant current is often of real value, while frequently vibration, dilation of the sphincter ani and also hot enemata prove beneficial.

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QUERY 5416.—"Endometritis, Placental Disease, or Placenta Prævia?" E. C. L., Indiana, writes: "I have a mess on my hands. I am 'stuck'—can find nothing to explain this case; never saw or heard of anything like it. Here are the facts: About three years ago a woman became pregnant, and at three months had a small hemorrhage; had four in all at intervals, each one increasing in quantity. A short time after the last one the sac broke and for nineteen days she dribbled water from the placental sac. Then labor set in and a six-months fetus was born. Not a drop of blood was

lost. The placenta (much absorbed) was disengaged; also the child. This case I diagnosed as a placenta prævia, nature bringing it to a termination.

"The same woman now is again pregnant, probably about seven months. Some three months ago she began to bleed again, and this has kept up nearly every day since; for the last month every day—about a tablespoonful. The last few days it is worse. I commenced giving stypticin, which checks it. Just before hemorrhage there is some uterine contraction, tense abdomen, etc. Bowels regular, appetite fair; not nervous, cheerful; vaginal examination does not show anything abnormal. Uterus high up, slightly anteverted; os patulous; child lively, especially at night. Can it be possible this is a second case of placenta prævia? Can anything be done to bring her to full term, and what is likely to take place when labor sets in? Lots of blood, I suppose. I have attended one thousand women in confinement, but this beats all my experience."

We doubt very much your diagnosis of placenta prævia. There would have been more hemorrhage, and there would have been nothing to cause the breaking of the membranes and dribbling of amniotic fluid. This woman may suffer from a chronic endometritis, fibroids or polypi. We do not like this constant hemorrhage. It seems that only a very careful examination, visual and digital, can throw any light upon the question. As you do not seem to discover anything wrong, the original disorder must remain obscure. Now as to the present condition. A "patulous os" is abnormal. Can you, by careful bimanual examination, outline any tumor? Is there any history of pain at menstrual period or shreddy discharge? Any living child born, or are these the only two pregnancies?

On general principles we should apply a snug wool tampon bearing bismuth, and administer just enough atropine valerianate to flush the capillaries, and for several days push hydrastinine hydrochloride and stypticin, hydrastis solution (Merrill) or some similar mild astringent. Put on a good

"uplifting" abdominal belt. It may be desirable to place the woman in the recumbent position, elevating the hips, for several hours daily. If you do this and push the medication suggested for a week or ten days you may be able to control any ordinary condition. Keep the bowels freely open.

QUERY 5417.—"Periungual Inflammation." F. M. C., Washington, asks aid in the following case of a lady patient, aged 30, married about six months. About two years ago when working, as a trained nurse, in a hospital, she was surprised to find her fingernails and the flesh around them getting very sore, for which she has been doctoring more or less ever since, but without benefit.

"The nails have turned brownish yellow, are thickened, softer than usual, and appear to scale and crumble, especially the lunula. Some have vertical and others transverse ridges and they are quite rough. The walls are red and swollen and very tender and from under the skin at the root there frequently ooze little beads of pus which apparently come from the root. One peculiar thing is that the little finger and half the next are very little affected. The flesh at the distal end is now cracking and nearly raw. It was thought that it might have been due to contact with the disinfecting liquids while in the hospital, but this is hardly possible as it is now attacking the toes. There is no history of syphilis in any way, while the urine I find all right. I have treated this as ringworm and also as psoriasis, but so far without results."

Periungual inflammation of this type must be regarded as evidencing a constitutional dyscrasia. A simple infection (even were the constitutional conditions unsatisfactory) would be evident only on the digit affected. This is not "ringworm" and not psoriasis, and an examination of the pus will probably reveal mixed infection (streptococci and staphylococci).

Periungual inflammation, in many cases, may be controlled by the application of hydrogen peroxide, following this with a boric-acid solution, then drying and painting

the part with a strong solution of largin or ichthargan. Or you may use compound tincture of benzoin. Examine the patient carefully; test reflexes; have urine tested (send to the laboratory 4 ounces from twenty-four-hour output, stating full amount voided); note the number and character of stools. Is there anemia? It is important to get beneath the surface and to arrive at the essential cause, if possible. Put the patient, for the present, on the arsenates of iron, quinine and strychnine with nuclein and push calcium lactophosphate. Lecithin should also be given between meals; in properly selected cases iridin and xanthoxylin will be found of decided advantage.

Perhaps it will be well to give echinacea for three days (locally and internally), and to apply echafolta (or similar fluid preparation of echinacea) on compresses to the affected area. This in place of the tincture of benzoin or largin solution. After three days you might change to the silver-salt solution. Then as conditions improve and the need for compresses, etc., ceases, resort to the tincture of benzoin. Don't forget the necessity for calcium. Also try colloidal silver (unguentum Credé).

Stelwagon, in his work on "Diseases of the Skin," has an extremely complete article upon onychia. The acquired form, as he says, is common. "There is a hypertrophic tendency, inflammation, swelling and purulent discharge. We must always think of the possibility of tubercular taint, and while invasion of the nails by the vegetable fungi or ringworm and favus bring about in some cases increase in size and a granular and friable condition, we do not find, as a rule, the peculiar inflammatory conditions of the matrix; neither do we get an exudation of pus." On page 891 you will find illustrated a case of onychia with hypertrophic nail change. He says this condition occurs most commonly in women, particularly in those who have their hands in water a great deal. Occasionally a condition is seen in connection with impetigo contagiosa, and independent staphylococcus or streptococcus infection of the nail-bed is frequently encountered.

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We take this excellent opportunity to mention a few of the interesting propositions presented by our advertisers in this issue of CLINICAL MEDICINE and request of our readers that in writing to these firms for samples, catalogues, and further details that CLINICAL MEDICINE shall secure credit for the inquiry.

To those interested in automobiles.

We call attention to the announcements in this issue of The Black Mfg. Co., Chicago; The Zimmerman Mfg. Co., Auburn, Ind.; The W. H. Kiblinger Co., Auburn, Ind.; A. R. Graham Automobile Co., Chicago; C. H. Metz, Waltham, Mass., and the Dyke Correspondence School of Motoring, St. Louis, Mo.

Our Sanitarium Advertising is increasing. We desire to direct attention to the announcements of this character on pages 77, 78, 79 and 80. Also on page 52.

Doctor, will you write to the H. J. Heinz Co., New York, for their booklet on the Heinz Products, mentioning this Journal. The Heinz 57 Varieties should have the endorsement of the Medical profession and we want to build up and keep advertising of this character in our pages. You can help us in doing so.

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BUSINESS ACTIVITY

A recent interview with Mr. Theo. Weicker of the well-known house of E. R. Squibb & Sons gives an optimistic view of the prospects for a revival of business activity.

While they in common with all producers have during the past year experienced a set-back (the result of the panic), matters have been slowly but steadily improving the last three months; and with the settlement of the political uncertainty, and the wonderful development of the agricultural interests of the country, as evidenced in the enormous harvest of 1908, they look for a gradual return of prosperity without any sensational booming, but all the more sure and enduring because of that condition.

Mr. Weicker has recently returned from a European trip where he has had wide opportunity for observation of business conditions abroad, and being of a conservative but broad-minded temperament his judgment is convincing and can be accepted as reliable.

A WONDER

We are in receipt of the January issue of your valued journal and wish to compliment you upon its appearance from every standpoint to be questioned. Typographically it is a wonder—editorially we believe it likewise.

Permit us to wish for your publication most hearty prosperity throughout the coming year.

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